

## **United Kingdom Carbon Dioxide Market Report and Forecast 2022-2027**

Market Report | 2022-09-14 | 113 pages | EMR Inc.

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### **Report description:**

United Kingdom Carbon Dioxide Market Report and Forecast 2022-2027

Market Outlook

According to the report by Expert Market Research (EMR), the United Kingdom carbon dioxide market attained a volume of 721.63 KMT in 2021. The market is expected to be driven by the increasing investments in carbon capture, storage, and utilisation technologies.

Carbon dioxide is a gas that is present in the atmosphere due to respiration and human activities, such as burning fossil fuels. It is required for the survival of life on Earth but the excess amount of the gas in the atmosphere can be extremely harmful to the environment as it causes global warming and also leads to health hazards, such as improper respiratory functions. Carbon dioxide is also obtained from various sources, such as hydrogen, ethyl alcohol, substitute natural gas, and others.

Hydrogen is extensively produced using the steam methane reforming process (SMR) from light hydrocarbons or natural gases. This, in turn, is surging the production of carbon dioxide as a by-product of hydrogen, which is contributing to the United Kingdom carbon dioxide market development. Also, corn ethanol plants generate high-purity carbon dioxide in the fermentation and distillation processes during the production of ethyl alcohol (ethanol). In biogas/bio CNG plants, the production of substitute natural gas is done through a fermentation process, in which CO<sub>2</sub> is obtained as a by-product.

Carbon dioxide is used in slaughterhouses for stunning pigs and chickens without restraining the animals and to minimise human contact. Thus, the expanding population of non-vegetarians in the country is leading to the growing demand for meat, which is resulting in the extensive use of CO<sub>2</sub> in the meat processing sector and resulting in the United Kingdom carbon dioxide market expansion. Carbon dioxide is also used with oxygen and nitrogen to control the temperature and humidity of food during storage and transportation, thus preventing the growth of moulds and extending the shelf life of dairy and baked goods.

The healthcare sector is heavily reliant on the supply of CO<sub>2</sub>. During operations, surgeons deploy CO<sub>2</sub> for stabilising body cavities as it provides clear visibility of the surgical area. CO<sub>2</sub> is also used for the transport of medicines and supplies in the healthcare sector. The oil and gas segment is adopting miscible carbon dioxide obtained from carbon, capture, and storage projects for

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improving EOR processes. Rising government initiatives towards setting up numerous carbon capture and storage projects are anticipated to expand the use of stored CO<sub>2</sub> in the oil and gas sector.

Carbon dioxide is extensively used in the welding of carbon steels as the gas increases the durability and crack resistance of the product, which is used in fencing, gates, and railings fabrication in the United Kingdom. Industrial CO<sub>2</sub> is used to enhance the production yield of crops, such as cucumber, pepper, tomato, and aubergine, which is leading to the United Kingdom carbon dioxide market growth.

The carbon capture, utilisation, and storage strategy is ensuring the seamless supply of CO<sub>2</sub> in the United Kingdom. In June 2022, Tata Chemicals announced the opening of the United Kingdom's largest carbon capture project. The plant would initially be capturing around 36,000 tons of CO<sub>2</sub> a year. The captured CO<sub>2</sub> would be used in the production of sodium bicarbonate for applications like dialysis machines, pharmaceutical tablets, and baking soda.

Also, there is increased production of CO<sub>2</sub> through alternate sources, such as bio-CO<sub>2</sub> from biogas or biodegradable feedstocks. The market players, like Ensus UK Ltd, produce biogenic CO<sub>2</sub> through a sugar fermentation process.

In November 2021, Ensus made a long-term investment in its business in Teesside and opened a new United Kingdom headquarters facility worth EUR 1.3 million near its biorefinery on the Wilton International site. The company produces carbon dioxide as a by-product during biofuel manufacturing and provided up to 40% carbon dioxide amid the shortage in the United Kingdom. Through long-term investments, the company aims to create a sustainable future. Such developments are expected to support the United Kingdom carbon dioxide market development.

#### Market Segmentation

The market can be divided on the basis of source, production, and end use.

##### Market Breakup by Source

- Hydrogen
- Ethyl Alcohol
- Ethylene Oxide
- Substitute Natural Gas
- Others

##### Market Segmentation by Production

- Biological
- Combustion

##### Market Breakup by End Use

- Food and Beverages
- Oil and Gas
- Medical
- Rubber
- Metal Fabrication
- Others

#### Competitive Landscape

The EMR report looks into the market shares, plant turnarounds, capacities, investments, and acquisitions and mergers, among other major developments, of the key players in the United Kingdom carbon dioxide companies. Some of the major key players explored in the report by Expert Market Research are as follows:

- Air Products Inc.
- BOC Limited (Linde)
- Air Liquide UK Ltd

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-□Pro Gases (UK) Ltd

-□Nippon Gases

-□Others

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

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