

# **Global Carbon Dioxide Market Size Study, by Form (Liquid, Gas, Solid), by Source (Ethyl Alcohol, Hydrogen, Ethylene Oxide, Substitute Natural Gas, Others), by End-Use Industry (Food & Beverage, Oil & Gas, Medical, Metal Fabrication, Firefighting, Others), and Regional Forecasts 2022-2032**

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## **Abstracts**

Global Carbon Dioxide Market is valued at approximately USD 11.11 billion in 2023 and is anticipated to grow with a healthy growth rate of more than 3.6% over the forecast period 2024-2032. Carbon dioxide (CO<sub>2</sub>) is a versatile chemical compound composed of one carbon atom and two oxygen atoms, known for its greenhouse gas properties and its significant role in the carbon cycle. Despite being present in low concentrations in the atmosphere, CO<sub>2</sub> is vital for various industrial applications, including hydrogen production through steam reforming of natural gas, ethanol production via fermentation, and numerous others.

The compound's adaptability is evident in its wide range of uses, such as an acidifying agent in water treatment, an inert gas in metalworking and fire suppression, a solvent in oil recovery, and cooling applications. One of the prominent factors driving the market growth is the increasing demand for carbonated beverages, which significantly boosts CO<sub>2</sub> consumption.

The adoption of Carbon Capture and Storage (CCS) technology is a critical trend propelling market growth. CCS technology captures CO<sub>2</sub> emissions from fossil fuel combustion in electricity generation, cement manufacturing, and biomass power plants, preventing these emissions from entering the atmosphere. CO<sub>2</sub> has diverse applications in the medical industry, such as stabilizing body cavities during minimally

invasive surgery, respiratory stimulation, tissue freezing, and tooth sensitivity assessment. Additionally, the food & beverage industry uses CO<sub>2</sub> for carbonating beverages and freezing meat & poultry, contributing to the rising demand for CO<sub>2</sub> from packaged food & beverage producers.

Transportation challenges pose a significant hurdle to market growth. Pipelines, the primary mode for CO<sub>2</sub> transport, require high maintenance and are subject to leakage risks, which can hinder market expansion. Additionally, protocols like the Kyoto Protocol, aimed at limiting greenhouse gas emissions, may further restrict the carbon dioxide market growth during the forecast period.

The key regions considered for the Global Carbon Dioxide Market study include Asia Pacific, North America, Europe, Latin America, and Rest of the World. Asia Pacific is a dominating region in the Global Carbon Dioxide Market in terms of revenue. The market growth in the region is being attributed to factors including due to high demand from the food & beverage and medical industries. China, as a major manufacturing hub, significantly contributes to the region's demand for CO<sub>2</sub>. The market in India is also growing, driven by increased beverage consumption due to a rising population and higher disposable incomes. Whereas, the market in North America is anticipated to grow at the fastest rate over the forecast period fueled by demand for oil recovery applications. The well-established infrastructure and rising awareness of environmental issues further support market growth in this region.

Major market player included in this report are:

Sicgil India Limited (India)  
Matheson Tri-Gas, Inc. (U.S.)  
Universal Industrial Gases, Inc. (U.S.)  
The Messer Group GmbH (Germany)  
SOL Spa (Italy)  
POET, LLC (U.S.)  
Reliant Gases (U.S.)  
India Glycols Limited (India)  
Linde plc (Ireland)  
Air Products and Chemicals, Inc. (U.S.)  
Air Liquide (France)  
Gulf Cryo  
BASF SE  
Coregas Pty Ltd  
Continental Carbonic Products, Inc.

The detailed segments and sub-segment of the market are explained below:

By Form

Liquid

Gas

Solid

By Source

Ethyl Alcohol

Hydrogen

Ethylene Oxide

Substitute Natural Gas

Others

By End-Use Industry

Food & Beverage

Oil & Gas

Medical

Metal Fabrication

Firefighting

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia  
South Korea  
RoAPAC

Latin America  
Brazil  
Mexico  
Rest of Latin America

Middle East & Africa  
Saudi Arabia  
South Africa  
RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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