

Global Carbon Dioxide Removals (CDR) Market

Market Research Report | 2025-01-14 | 131 pages | BCC Research

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Report description:

Description

Report Scope

This report on the global carbon dioxide removal (CDR) market segments the market by technology type, carbon credit buyers, and regions. The market size is provided in value (\$ millions) and volume (thousand tons). The report also discusses competitive intelligence, analyzing companies based on their product offerings and revenues generated from the CDR business. It also details market dynamics, emerging technologies, and global developments in the industry.

In this report, CDR technologies include land- and ocean-based technologies such as biochar, direct air capture (DAC), bioenergy carbon capture and sequestration (BECCS), and ocean alkalization. However, carbon capture, utilization, and storage (CCUS) technologies such as post-combustion, pre-combustion, and oxy-fuel combustion are outside the scope of the report.

Report Includes

- 40 data tables and 82 additional tables
- Analysis of trends in the global market for carbon dioxide removals (CDR), featuring revenue data for 2023, estimated figures for 2024, forecasts for 2025 and 2027, and projections of compound annual growth rates (CAGRs) through 2029
- Estimates of the current market size and revenue growth prospects, accompanied by a market share analysis by technology type, carbon credit buyer and geographical region
- Coverage of technological advances in CDR technologies and the current and future market potential, as well as an analysis of the regulatory framework and reimbursement scenarios
- Market share analysis of the key companies in the industry and coverage of mergers and acquisitions, joint ventures, collaborations and partnerships
- Profiles of the leading market participants, including Aperam BioEnergia, Climeworks AG, Carbofex Ltd., Carbon Engineering ULC., and Exomad Green

Executive Summary

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Summary:

Market Summary

The majority of greenhouse gas (GHG) emissions are generated by developed countries with high industrialization growth. This has created a significant carbon debt that needs to be addressed. Developing countries in the Asia-Pacific and Middle East and Africa (MEA) regions have experienced rapid economic growth, leading to a surge in their carbon emissions. This is primarily due to increased industrial activity, often relying on fossil fuels, growing energy demand for both industrial and residential purposes, and deforestation and unsustainable land-use practices. According to the United Nations Conference on Trade and Development (UNCTAD), three countries - China, the U.S., and India - account for more than 50% of CO2 emissions, and 20 countries account for 80% of the global emissions.

Manufacturing and processing industries are the foundation for flourishing economic growth and are the core of global efforts towards clean energy transition. Industrial emissions, occurring from process-related and energy-intensive activities, are often difficult to reduce. To support the transition towards a sustainable future, a comprehensive strategy is needed. CDR technologies offer a solution to mitigate these emissions and support the decarbonization of heavy industries. The global CDR market has strong growth potential in the coming years due to worldwide initiatives to achieve net zero emissions.

CDR, also known as geoengineering or carbon geoengineering, is gaining global recognition as a potential solution to the climate crisis despite concerns about its unknown impacts on biodiversity and lack of international regulation. While UN bodies such as the Convention on Biological Diversity (CBD) oppose CDR, others like the UN Framework Convention on Climate Change (UNFCCC) are more supportive, promoting it through mechanisms like Article 6.4 of the Paris Agreement and ocean climate change proposals. The U.S., Saudi Arabia, the U.K., Japan, and the EU are proponents of CDR technologies, whereas the evidence of CDR projects and their implications are less evident in regions such as Mexico, Africa and South America.

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References

Abbreviations Used in the Report

Company Profiles

APERAM BIOENERGIA

ARCA

BUSSME ENERGY AB

CARBOFEX LTD.

CARBON ENGINEERING ULC.

CARBONFREE

CARBFIX HF.

CELLA MINERAL STORAGE INC.

CLIMEWORKS

EBB CARBON INC.

EXOMAD GREEN

GLOBAL THERMOSTAT (ZERO CARBON SYSTEMS)

NOVOCARBO GMBH

NEUSTARK AG

ORSTED A/S

PACIFIC BIOCHAR BENEFIT CORP.

STOCKHOLM EXERGI AB

WAKEFIELD BIOCHAR

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