

Global Carbon Recycling Service Supply, Demand and Key Producers, 2026-2032

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Abstracts

The global Carbon Recycling Service market size is expected to reach \$ 10848 million by 2032, rising at a market growth of 9.1% CAGR during the forecast period (2026-2032).

A Carbon Recycling Service captures carbon dioxide (CO₂) from industrial emissions or the atmosphere and transforms it into valuable new products like fuels, chemicals (e.g., for soap/fertilizer), or building materials (like concrete aggregates), effectively treating CO₂ as a carbon resource to create a circular economy, reduce emissions, and achieve carbon neutrality. Companies offer these services through technologies such as artificial photosynthesis, methanation, and mineralization, turning waste CO₂ into sustainable products. Global CO₂ recycling volume is projected to reach 150 million tons by 2025, with an average recycling price of \$39 per ton. Gross profit margins typically range from 20% to 40%.

Carbon recycling services refer to integrated solutions that capture carbon dioxide from industrial or centralized emission sources, purify it, and convert it into reusable resources. The upstream segment mainly includes absorbents and adsorbents, membrane materials, catalysts, separation and purification equipment, compression and storage materials, as well as energy and utility inputs, with value concentrated in efficiency, energy consumption, and operational stability. Downstream represents the core of value realization and demand. The food and beverage industry has the highest requirements for CO₂ purity and safety, using recycled carbon dioxide for carbonated drinks, food preservation, and cold chain applications. The chemical industry utilizes recycled CO₂ as a feedstock for urea, methanol, polycarbonates, and specialty chemicals, emphasizing supply stability and scalability. The construction materials sector applies CO₂ in concrete curing and mineralization processes, focusing on cost

control and verifiable emission reductions. Energy and fuel applications are expanding through synthetic fuels and e-fuels, where policy incentives and long-term commercial viability are critical. In addition, large emission-intensive enterprises adopt carbon recycling services to reduce carbon intensity and generate carbon assets, with purchasing decisions centered on emission reduction effectiveness, compliance, and lifecycle costs.

In terms of trends, carbon recycling services are shifting from purely emission reduction solutions toward resource utilization and commercialization, increasingly integrated with carbon trading, green finance, and industrial collaboration. Key drivers include carbon neutrality targets, rising carbon compliance costs, expansion of downstream application scenarios, and government subsidies and pilot programs. Major constraints include high overall energy consumption and costs, incomplete maturity of some conversion technologies, volatility in recycled product markets, and inconsistent policy continuity and standards across regions.

This report studies the global Carbon Recycling Service demand, key companies, and key regions.

This report is a detailed and comprehensive analysis of the world market for Carbon Recycling Service, and provides market size (US\$ million) and Year-over-Year (YoY) growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Carbon Recycling Service that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Carbon Recycling Service total market, 2021-2032, (USD Million)

Global Carbon Recycling Service total market by region & country, CAGR, 2021-2032, (USD Million)

U.S. VS China: Carbon Recycling Service total market, key domestic companies, and share, (USD Million)

Global Carbon Recycling Service revenue by player, revenue and market share 2021-2026, (USD Million)

Global Carbon Recycling Service total market by Type, CAGR, 2021-2032, (USD

Million)

Global Carbon Recycling Service total market by Application, CAGR, 2021-2032, (USD Million)

This report profiles major players in the global Carbon Recycling Service market based on the following parameters - company overview, revenue, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Air Liquide, Linde, Air Products, BASF, Chiyoda, TOYO Engineering, JGC, Carbon Recycling International, LanzaTech, LanzaJet, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the world Carbon Recycling Service market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), by player, by regions, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Carbon Recycling Service Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Carbon Recycling Service Market, Segmentation by Type:

Industrial Sources

Atmospheric Sources

Biological Sources

Carbon Materials

Others

Global Carbon Recycling Service Market, Segmentation by CO₂ Capture Technology:

Chemical Absorption

Physical Adsorption

Membrane Separation

Cryogenic Distillation

Biological Immobilization

Direct Air Capture (DAC)

Global Carbon Recycling Service Market, Segmentation by CO₂ Storage Methods:

Geological Sequestration

Marine Sequestration

Mineral Sequestration

Biosequestration

Artificial Carbon Sequestration

Global Carbon Recycling Service Market, Segmentation by CO₂ Processing Capacity:

100 tons/year

100-1000 tons/year

1000-10000 tons/year

10000-100000 tons/year

More than 100000 tons/year

Global Carbon Recycling Service Market, Segmentation by Application:

Power

Steel

Chemical

Building Materials

Agriculture

Companies Profiled:

Air Liquide

Linde

Air Products

BASF

Chiyoda

TOYO Engineering

JGC

Carbon Recycling International

LanzaTech

LanzaJet

European Energy

Liquid Wind

HIF Global

Infinium

Twelve

AIR COMPANY

Covestro

Econic Technologies

Newlight Technologies

Novomer

CarbonCure Technologies

CarbonBuilt

neustark

Blue Planet Systems

CarbiCrete

Carbon Upcycling Technologies

MCi Carbon

Carbon8 Systems

Key Questions Answered

1. How big is the global Carbon Recycling Service market?
2. What is the demand of the global Carbon Recycling Service market?
3. What is the year over year growth of the global Carbon Recycling Service market?
4. What is the total value of the global Carbon Recycling Service market?
5. Who are the Major Players in the global Carbon Recycling Service market?
6. What are the growth factors driving the market demand?

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