

Carbon Capture, Utilization & Storage (CCUS) Market Forecasts to 2032 – Global Analysis By Service (Capture, Utilization, Transportation and Storage), Storage Type, Utilization, Technology, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Carbon Capture, Utilization & Storage (CCUS) Market is accounted for \$4.3 billion in 2025 and is expected to reach \$10.9 billion by 2032 growing at a CAGR of 14.2% during the forecast period. Carbon Capture, Utilization, and Storage (CCUS) is a climate mitigation technology that captures carbon dioxide (CO₂) emissions from industrial sources or directly from the atmosphere. Once captured, the CO₂ is either reused in industrial processes—such as enhanced oil recovery or the production of fuels and chemicals—or permanently stored underground in geological formations. CCUS helps reduce greenhouse gas emissions, enabling industries to transition toward low-carbon operations while continuing essential activities. It plays a vital role in achieving net-zero targets, especially in sectors where emissions are hard to eliminate. CCUS also supports the development of carbon removal strategies and circular carbon economies.

Market Dynamics:

Driver:

Climate Change Mitigation Pressure

Rising climate change mitigation pressure is catalyzing growth in the Carbon Capture, Utilization & Storage (CCUS) market. Stricter emissions regulations, net-zero commitments, and global decarbonization goals are driving investments in CCUS

technologies. Industries are adopting CCUS to meet sustainability targets, while governments offer incentives and funding support. This momentum fosters innovation, scalability, and commercialization of CCUS solutions, positioning them as essential tools for achieving climate resilience and enabling a low-carbon future across energy, manufacturing, and industrial sectors.

Restraint:

High Capital & Operational Costs

High capital and operational costs significantly hinder the growth of the Carbon Capture, Utilization & Storage (CCUS) market. These expenses deter investment, limit scalability, and delay project deployment, especially in developing regions. The financial burden restricts innovation and adoption, making CCUS less competitive compared to other low-carbon technologies. Without substantial subsidies or policy support, high costs remain a major barrier to achieving widespread implementation and climate mitigation goals.

Opportunity:

Technological Advancements

Technological advancements are revolutionizing the Carbon Capture, Utilization & Storage (CCUS) market by enhancing efficiency, scalability, and cost-effectiveness. Innovations in direct air capture, advanced solvents, and AI-driven monitoring systems are accelerating deployment and reducing operational costs. Breakthroughs in utilization technologies are transforming captured CO₂ into valuable products like fuels and building materials, creating new revenue streams. These developments are driving global adoption, enabling industries to meet climate goals while fostering sustainable economic growth and low-carbon innovation.

Threat:

Limited Infrastructure

Limited infrastructure significantly hampers the growth of the Carbon Capture, Utilization & Storage (CCUS) market. Inadequate pipeline networks, storage facilities, and transportation systems restrict scalability and deployment, especially in remote or industrial regions. This leads to higher operational costs, delayed project timelines, and reduced investor confidence. Without robust infrastructure, CCUS technologies struggle

to reach commercial viability, undermining global decarbonization goals and slowing the transition to a low-carbon economy.

Covid-19 Impact

The Covid-19 pandemic temporarily disrupted the CCUS market by delaying project timelines, reducing investments, and shifting focus toward immediate public health and economic recovery. Supply chain interruptions and workforce limitations affected deployment and maintenance of CCUS infrastructure. However, the crisis also underscored the importance of resilient, low-carbon technologies. As economies recover, renewed climate commitments and stimulus packages are expected to accelerate CCUS adoption, reinforcing its role in sustainable industrial transformation.

The chemical production segment is expected to be the largest during the forecast period

The chemical production segment is expected to account for the largest market share during the forecast period, due to the sector's high carbon emissions and its growing commitment to decarbonization. CCUS technologies are increasingly integrated into chemical manufacturing processes to capture CO₂ and convert it into valuable products like methanol, urea, and synthetic fuels. As regulatory pressure intensifies and sustainability goals become central, chemical producers are investing heavily in CCUS to reduce their carbon footprint and maintain operational continuity.

The power generation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the power generation segment is predicted to witness the highest growth rate as this surge is driven by the urgent need to decarbonize electricity production, especially from fossil fuel-based plants. CCUS enables power producers to capture CO₂ emissions directly from flue gases and store them underground, making it a critical tool for transitioning to low-carbon energy systems. With increasing global energy demand and net-zero commitments, CCUS adoption in power generation is accelerating rapidly.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to region's dominance stems from its vast industrial base, rising energy

consumption, and strong governmental support for climate initiatives. Countries like China, India, and Japan are investing in CCUS to mitigate emissions from heavy industries and coal-based power plants. Additionally, regional collaborations and pilot projects are expanding, making Asia Pacific a key hub for CCUS deployment and innovation.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to robust policy frameworks, substantial government funding, and advanced technological capabilities. The U.S. and Canada are leading in large-scale CCUS projects, especially in sectors like oil and gas, cement, and power generation. The region's emphasis on clean energy transition and carbon neutrality targets is driving aggressive CCUS adoption, positioning North America as a global leader in climate mitigation technologies.

Key players in the market

Some of the key players profiled in the Carbon Capture, Utilization & Storage (CCUS) Market include ExxonMobil, Mitsubishi Heavy Industries, Ltd., Shell plc, Linde plc, Equinor ASA, Fluor Corporation, TotalEnergies SE, Petro-Canada, Drax Group, Prairie State Generating Company, Sumitomo Corporation, Siemens AG, JGC Holdings Corporation, GE Vernova, Schlumberger Limited, Hitachi Ltd., Aker Solutions and Honeywell International.

Key Developments:

In July 2025, Mitsubishi Heavy Industries has partnered with Modius Inc. to integrate Modius's OpenData DCIM platform with MHI's power, cooling, and control systems. This collaboration enhances real-time monitoring, AI/ML analytics, and energy efficiency for data centers worldwide.

In June 2025, Mitsubishi Shipbuilding and Finnish firm Elomatic have signed a framework agreement to partner in maritime engineering, combining strengths in digital and decarbonization technologies. Their collaboration aims to expand engineering services globally—with special focus on Japan and Europe—enhancing innovation in the marine sector.

Services Covered:

Capture

Utilization

Transportation

Storage

Storage Types Covered:

Geological Storage

Mineral Storage

Ocean Storage

Utilizations Covered:

Enhanced Oil Recovery (EOR)

Building Materials

Chemical Production

Biofuel Production

Other Industrial Applications

Technologies Covered:

Pre-combustion Capture

Direct Air Capture (DAC)

Post-combustion Capture

Oxy-fuel Combustion Capture

Industrial Separation

End Users Covered:

Oil & Gas

Fertilizers

Power Generation

Iron & Steel

Chemicals & Petrochemicals

Cement

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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