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

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Abstracts

According to Stratistics MRC, the Global Carbon Capture, Utilization, and Storage (CCUS) Market is accounted for $4.59 billion in 2025 and is expected to reach $12.45 billion by 2032 growing at a CAGR of 15.3% during the forecast period. Carbon Capture, Utilization, and Storage (CCUS) involve advanced methods to capture carbon dioxide (CO?) from power plants, industries, or the air before it is released into the atmosphere. The collected CO? is subsequently utilized in applications like fuel synthesis or oil recovery, or safely stored in deep geological reservoirs. This process plays a vital role in lowering greenhouse gas emissions and supporting global climate change mitigation efforts.

Market Dynamics:

Driver:

Tightening emissions targets & climate commitments

Governments are enforcing stricter carbon regulations to meet net-zero goals and international climate accords. Heavy-emitting industries are under pressure to adopt capture solutions to avoid penalties and maintain operational licenses. As carbon pricing mechanisms become more widespread, CCUS is gaining traction as a compliance and mitigation tool. The rise of ESG investing is also prompting corporations to integrate CCUS into sustainability strategies. These converging forces are creating a

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robust policy and financial environment for CCUS expansion.

Restraint:

Safety and public acceptance concerns

Communities often resist infrastructure projects due to fears of leakage, seismic risks, or long-term storage reliability. Regulatory bodies require extensive environmental assessments and stakeholder engagement, which can delay project approvals. Misinformation and lack of awareness about CCUS benefits further complicate acceptance. Developers must invest in transparent communication and risk mitigation to build trust. Without broad societal support, scaling CCUS remains a challenge despite technological readiness.

Opportunity:

Blue hydrogen and ammonia production synergy

The synergy between blue hydrogen and ammonia production presents a compelling growth avenue for CCUS. These processes generate concentrated CO? streams ideal for capture and reuse, enhancing economic viability. Integrated facilities can leverage shared infrastructure for compression, transport, and storage, reducing capital costs. Demand for low-carbon fuels in shipping, power generation, and heavy industry is rising, boosting market potential. Policy incentives and cross-sector partnerships are accelerating pilot projects and commercialization. This convergence is positioning CCUS as a cornerstone of clean fuel ecosystems.

Threat:

Competition from alternative decarbonization technologies

Technologies such as direct air capture, green hydrogen, and electrification are attracting significant investment and policy support. In some applications, these solutions offer lower lifecycle emissions or simpler deployment pathways. CCUS must demonstrate cost-effectiveness and scalability to remain relevant in diversified climate strategies. Fragmented regulatory frameworks and inconsistent carbon pricing can also skew market dynamics. As innovation accelerates, CCUS providers must continuously adapt to maintain strategic positioning.

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Covid-19 Impact:

The pandemic disrupted CCUS project timelines due to supply chain bottlenecks and workforce limitations. Travel restrictions and lockdowns delayed site assessments, permitting, and construction activities. However, the crisis also highlighted the importance of resilient infrastructure and low-carbon recovery strategies. Governments introduced stimulus packages that included funding for clean energy and CCUS initiatives. Remote monitoring and digital tools gained prominence, improving operational continuity. Post-Covid, the sector is prioritizing flexible deployment models and regional diversification to mitigate future shocks.

The capture segment is expected to be the largest during the forecast period

The capture segment is expected to account for the largest market share during the forecast period, due to its foundational role in emissions mitigation. Industrial facilities and power plants are increasingly integrating capture units to comply with carbon regulations. Technological advancements in post-combustion, oxy-fuel, and pre-combustion capture are improving efficiency and lowering costs. Modular and retrofit-friendly designs are expanding applicability across legacy infrastructure. Rising demand for point-source capture in cement, steel, and chemical sectors is reinforcing segment leadership.

The building materials segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the building materials segment is predicted to witness the highest growth rate, driven by innovation in carbon-negative construction. Companies are developing cement, concrete, and aggregates that incorporate captured CO?, turning waste into value-added products. Regulatory support for low-carbon building codes is accelerating adoption in urban development. Green procurement policies and sustainability certifications are boosting demand for CO?-infused materials. Startups and incumbents are collaborating to scale production and validate performance.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, propelled by industrial expansion and climate policy momentum. Countries like China, India, and South Korea are investing in large-scale capture projects across power and manufacturing sectors. Regional governments are launching carbon

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neutrality roadmaps that include CCUS as a strategic pillar. Domestic technology development and international collaborations are enhancing deployment capabilities. Infrastructure buildout for CO? transport and storage is gaining pace, supported by public-private partnerships.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, fueled by innovation, policy incentives, and private sector leadership. The U.S. Inflation Reduction Act and Canada's Clean Fuel Standard are catalyzing investment in CCUS infrastructure. Advanced R&D in capture materials, monitoring systems, and storage techniques is driving technological breakthroughs. Oil and gas companies are repurposing assets for CO? handling, accelerating market readiness. Regional hubs and clusters are emerging to streamline logistics and reduce costs.

Key players in the market

Some of the key players in Carbon Capture, Utilization, and Storage (CCUS) Market include ExxonMobil, Air Liquide, Shell, Linde plc, Chevron, CarbonCure, Occidental, Svante, TotalEnergies, Carbon Clean, Equinor, Carbon Engineering, Eni, Climeworks, and Aker Carbon.

Key Developments:

In November 2024, TotalEnergies and Oil India Limited (OIL) signed a Cooperation Agreement to carry out methane emissions detection and measurement campaigns using TotalEnergies' pioneer AUSEA technology at OIL sites in India. State-owned enterprise OIL recently joined the Oil and Gas Decarbonization Charter (OGDC), a global industry initiative launched at COP28, co-chaired by TotalEnergies' CEO. The OGDC's ambition is to work towards net-zero operations by 2050, as well as near-zero upstream methane emissions and zero routine flaring.

In November 2024, Exxon Mobil Corporation and LG Chem have signed a non-binding memorandum of understanding (MOU) for a multiyear offtake agreement for up to 100,000 metric tons of lithium carbonate. The lithium will be supplied from ExxonMobil's planned project in the U.S. to LG Chem's cathode plant in Tennessee, which LG Chem expects to be the largest of its kind in the U.S.

Services Covered:

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- Capture
- Transportation
- Utilization
- Storage

Capture Sources Covered:

- Power Generation
- Oil & Gas
- Cement
- Iron & Steel
- Chemical & Petrochemical
- Other Industrial Sources

Storage Types Covered:

- Geological Storage
- Mineralization and Carbonate Formation

Technologies Covered:

- Pre-Combustion Capture
- Post-Combustion Capture
- Oxy-Fuel Combustion

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- Direct Air Capture

Utilization Pathways Covered:

- Enhanced Oil Recovery (EOR)
- Building Materials (e.g., Concrete, Aggregates)
- Chemical Production (e.g., Methanol, Urea)
- Algae and Biological Applications
- Food & Beverage Industry

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe

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- 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

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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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Contents

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List Of Tables

LIST OF TABLES

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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