

Carbon Capture, Utilization, and Storage Market by Service (Capture, Transportation, Utilization, Storage), Technology (Chemical Looping, Solvents & Sorbent, Bio-Energy CCS, Direct Air Capture), End-Use Industry, and Region - Global Forecast to 2027

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Report description:

The global carbon Capture, Utilization, and Storage market size is projected to grow from USD 2.4 Billion in 2022 to USD 4.9 Billion by 2027, at a CAGR of 15.1% during the forecast period. The increasing demand for carbon Capture, utilization, and storage in power generation, and oil & gas industry is one of the most significant factors projected to drive the growth of the carbon Capture, utilization, and storage market.

□Transportation is the fastest growing service type of carbon Capture, utilization, and storage market□

Transportation is second within the procedure that is followed after capturing the carbon. It involves transporting carbon from the capture location to the storage area using trucks, ships and pipelines. Pipelines are most favored as they offer low value for transportation in long term. Alongside, it is the technique where the emission of CO₂ throughout the transportation is very much less, making them most effective for the purpose. For industrial applications, onshore trucks are favored, whilst for EOR and storage application purposes, pipelines offers powerful mode of transportation of CO₂. As in line with worldwide CCS institute, there already exists 6500 kms of CO₂ pipeline, maximum of them linked to EOR packages.

□Chemical Looping is the fastest growing technology adopted in carbon Capture, utilization, and storage market□

Chemical looping or chemical looping combustion is an inherent CO₂ capture process during thermal fuel conversion activities in industries. It mainly involves a series of chemical reactions to produce nitrogen-free flue gas that majorly constitutes CO₂, H₂O, and reduced oxy-carbonates. This flue gas having very less chemical mixture is then separated and utilized during other stages of the carbon capture, utilization, and storage program. Chemical looping technology is majorly installed in the separation and capture of carbon from flue gas emitted in the oil & gas and chemical industries.

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□Power generation to be the fastest growing industry in carbon Capture, utilization, and storage market□

Fossil fuel power plants generate a significant amount of CO2 emissions, which are the main cause of climate change. Among CO2 mitigation options, carbon capture and storage is considered the only technology that can significantly reduce the emissions of CO2 from fossil fuel combustion sources. The existing fleet of fossil fuel combustion power plants currently generates significant amounts of CO2 emissions into the atmosphere (more than 12 billion tons of CO2 per year). According to the International Energy Agency, electricity production from fossil fuels will increase by nearly 30% by 2035, inevitably leading to more CO2 emissions. This is where carbon capture, utilization, and storage will be highly useful to curb these emissions of CO2. There are mainly three technological routes for CO2 capture from power plants: post-combustion, pre-combustion, and oxy-fuel combustion. The prime advantage of post-combustion capture is that it can be integrated into existing power plants without altering the combustion process.

□North America to be the dominating region in carbon Capture, utilization, and storage market in terms of both value and volume.□

North America led the carbon capture, utilization, and storage market, in terms of value, in 2021 and is projected to register a CAGR of 14.1% between 2022 and 2027. The growth of the region's market is driven by the early adoption of CCUS technology in the region and the execution of various large-scale projects in the US and Canada. Major projects such as the Petra Nova Carbon Capture Project (US) and Boundary Dam CCS Project (Canada) supported the market in North America.

This study has been validated through primary interviews conducted with various industry experts globally. These primary sources have been divided into the following three categories:

-□By Company Type- Tier 1- 37%, Tier 2- 33%, and Tier 3- 30%

-□By Designation- C Level- 50%, Director Level- 20%, and Others- 30%

-□By Region- Europe- 50%, Asia Pacific (APAC) - 20%, North America- 15%, Middle East & Africa (MEA)-10%, Latin America-5%,

The report provides a comprehensive analysis of company profiles :

Royal Dutch Shell (Netherlands), Fluor Corporation (US), Mitsubishi Heavy Industries, Ltd. (Japan), Exxon Mobil Corporation (US), and Linde Plc (UK), JGC Holdings (Japan), Schlumberger Ltd (US), Aker Solutions (Norway), Honeywell International (US), Equinor ASA (Norway).

Research Coverage

This report covers the global carbon Capture, utilization, and storage market and forecasts the market size until 2027. It includes the following market segmentation - by Service (Capture, Transportation, Utilization, Storage), by Technology (Chemical Looping, Solvents & Sorbent, Bio-Energy CCS, Direct Air Capture), by End-Use Industry (Oil & Gas, Power Generation, Chemicals & Petrochemicals, Cement, Iron & Steel, and Others), and Region (North America, Europe, Asia Pacific, Middle East & Africa, South America). Porter's Five Forces Analysis, along with the drivers, restraints, opportunities, and challenges, have been discussed in the report. It also provides company profiles and competitive strategies adopted by the major players in the global carbon Capture, utilization, and storage market.

Key benefits of buying the report:

The report is expected to help market leaders/new entrants in this market in the following ways:

1. This report segments the global carbon capture, utilization, and storage market comprehensively. It provides the closest approximations of the revenues for the overall market and the sub-segments across different verticals and regions.
2. The report helps stakeholders understand the pulse of the carbon Capture, utilization, and storage market and provides them with information on key market drivers, restraints, challenges, and opportunities.
3. This report will help stakeholders to understand competitors better and gain more insights to better their position in their businesses. The competitive landscape section includes the competitor ecosystem, new product development, agreement, contract, expansion, and acquisition.

Reasons to buy the report:

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The report will help leaders/new entrants in this market by providing them with the closest approximations of the revenues for the overall carbon capture, utilization, and storage market and the sub-segments. This report will help stakeholders to understand the competitive landscape and gain more insights and position their businesses and market strategies in a better way.

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