Sustainability
in Depth
Second Quarter 2026

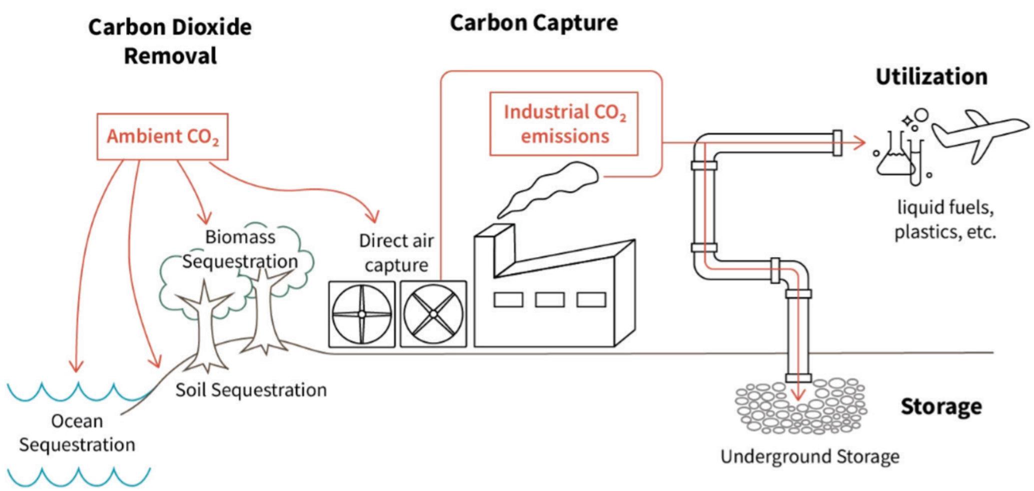
Turning Emissions Into Assets: A Guide to Carbon Capture, Utilization and Storage

It is increasingly clear that carbon emissions management will have a role to play in helping hard-to-abate sectors reach their medium and long-term decarbonization goals. As such, investors need to understand the emergent technologies shaping this market and the role that demand for carbon management will play in driving future sector-level dynamics. Here, we attempt to demystify carbon capture, utilization and storage (CCUS), using insights gleaned from our thematic research on the topic.

CCUS refers to the deployment of technologies dedicated to the prevention from entering or removal of CO2 emissions in the atmosphere, and ultimately storing compressed CO2 deep underground.

Broadly, CCUS includes two approaches to removing and sequestering CO2 emissions:

- Point Source Carbon Capture and Storage: removal of "new" emissions directly produced by industrial operations.
- Carbon Dioxide Removal: atmospheric carbon capture and removal of "existing" emissions.



Source: Stanford Energy Carbon Management as of October 2023.

Although CCUS projects currently reduce only a small percentage of emissions worldwide, they have the potential to play a crucial role in helping the energy and capital goods sectors significantly lower their emissions in the future. In fact, some sectors have few alternative solutions for achieving net zero. Recent campaigns like "Gigatonne by 2030" — referring to a target capturing one gigatonne (one billion metric tonnes) of CO2 emissions annually by the year 2030 — in part reflects an appetite in the energy sector for large-scale carbon management solutions.

Cross-sectoral research reveals potential in CCUS

In service of understanding sector trends, related alpha opportunities and downside risks, we aimed to:

1. Understand the recent spike in CCUS project announcements, and whether it is realistic and sustainable
2. Inform our view on the long-term outlook of gas (and coal) in energy and industrial processes
3. Identify areas of risk for stranded assets, wasted capex or substantial cost-overruns
4. Understand credibility of transition plans for energy and industrials companies
5. Identify who is doing it effectively as well as solutions providers with substantial growth potential

In line with the above, members of our investment team conducted focused research, engaged with issuers and held internal discussions across relevant sector teams around the growing importance of carbon capture technology in the global push for decarbonization. The work sought to contribute to our investment process and identify emerging opportunities in the CCUS space.

Net zero targets and regulatory support are driving demand for CCUS innovation

Market trends, including policy incentives, technological advancements and corporate demand in high-emitting sectors, are key drivers of increased market demand for CCUS technology and are helping to make this an economically viable option.

Legislation / Policy	Date	Description
United States		
Bipartisan Infrastructure Law	2021	Funds carbon management infrastructure and pilot projects. Since 2025, some funding has been redirected to coal plant life extension rather than CCUS deployment.
Inflation Reduction Act – Section 45Q Tax Credit	2022	Enhances tax credits for CCUS projects and was preserved in the 2025 One Big Beautiful Bill Act.
European Union		
Net-Zero Industry Act	2024	Sets a binding 50 Mt/yr EU CO2 storage target by 2030 and fast-tracks permitting for CCUS projects, classifying them as a strategic net-zero technology.
Industrial Carbon Management Strategy	2024	Outlines an EU roadmap to scale CCUS infrastructure.
EU Innovation Fund	2020	Finances large-scale CCUS and clean-energy projects across EU member states.
Fit for 55 Package incl. EU Emissions Trading System (ETS) reform	2021	Strengthens the EU ETS and related measures to set carbon prices and incentivize CCUS investment.
United Kingdom		
North Sea Transition Deal	2021	Supports the development of offshore CCUS capacity, leveraging existing North Sea oil and gas infrastructure.
East Coast Cluster/Northern Endurance Partnership	2024	Funds CCUS and other clean energy projects with the aim of decarbonizing UK's high-emitting industrial sites.
Australia		
Offshore Petroleum and Greenhouse Gas Storage Act (amended 2024)	2006	Provides a legal framework for offshore GHG storage in Commonwealth waters.
Safeguard Mechanism	2023	Tightens emissions baselines for high emitters, driving carbon offset demand and funding CCUS projects that target hard-to-abate sectors.
China		
15th Five-Year Plan	2026–2030	The 14th Five-Year Plan (2021–2025) set targets and funded CCUS pilot and demonstration projects across state-owned energy firms. The 15th Five-Year Plan (2026–2030) supports the scaling of these projects among other climate-related objectives.
Japan		
Act on Carbon Dioxide Storage Business	2024	Creates Japan's first CCUS licensing regime.
South Korea		
Act on Capture, Transportation, Storage and Utilization of Carbon Dioxide	2024	Reclassifies CO2 from being a "waste" product and establishes permitting and funding support for CCUS projects.

Above: A non-exhaustive list of global government action supporting CCUS implementation and scaling. Please note that this list reflects initiatives as of 1 March 2026.

This supportive policy environment encourages companies to adopt CCUS and also incentivizes investment in the development of more cost-efficient, scalable carbon capture technologies, further enabling the transition to a low-carbon economy. Financial incentives to produce or purchase lower emission products could also alter supply chains, shifting competitive advantages toward firms with lower emissions or countries with a higher concentration of firms with CCUS. As CCUS has become more mainstream, geographical formations allowing for underground carbon storage — depleted oil and gas wells, saline reservoirs, basalt formations and old coal seams — have offered a disproportionate “first mover” advantage to a handful of global regions. These regions include North American oil and gas regions, the European North Sea, Australia and Saudi Arabia.

CCUS in the energy sector

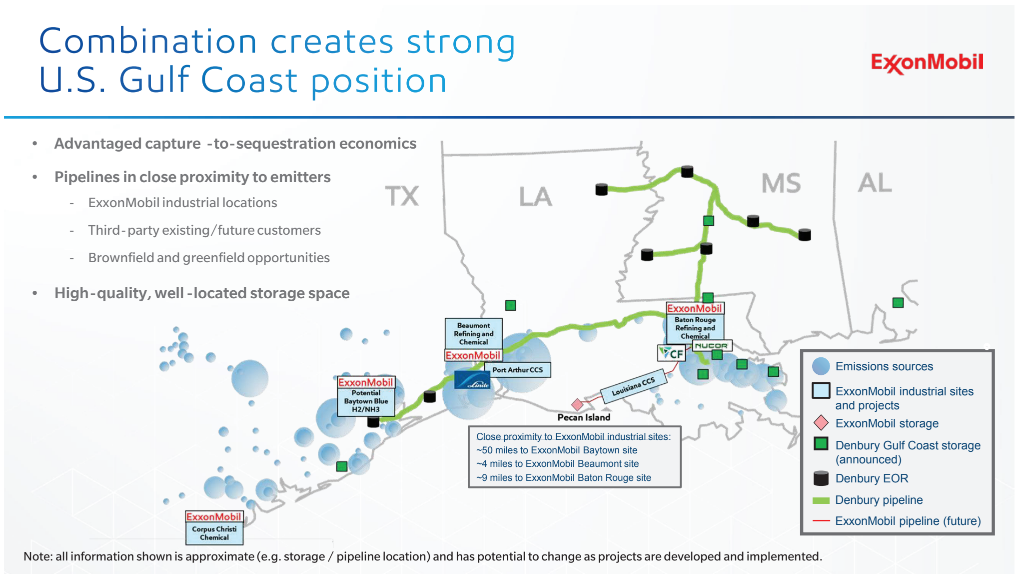
Upstream energy producers able to offer CCUS to customers can create new revenue streams. In power utilities, CCUS can enable power suppliers to meet rising demand for low carbon energy. However, implementing this technology also has the potential to increase production costs.

Case study: Exxon and Denbury

Major players in the energy sector are placing bets on the future profitability of CCUS, as evidenced by Exxon’s $4.9 billion acquisition of American carbon capture and storage company Denbury Inc. in 2023. Touting the US’ largest pipeline network across the southeastern Unites States, Denbury was one of the largest and most established players in the American CCUS space.

The case for the acquisition was enhanced by factors including:

1. States in the Southeast US — including Mississippi, Louisiana and Texas — are the dominant domestic producers of oil and natural gas, thus much infrastructure was already in place.
2. There is significant demand for CCUS from the substantial local industrial base, in addition to Exxon’s own industrial sites.
3. Denbury’s pipelines are positioned above deep earth geographic formations suited to long-term CO2 storage.
4. Denbury had already secured the necessary Class VI permits for carbon sequestration, which Exxon would be grandfathered into.



Source: ExxonMobil Announces Acquisition of Denbury Presentation as of July 13, 2023.

The Denbury deal was deemed a more cost-effective alternative to building out separate infrastructure and pipelines from scratch. Acquiring infrastructure that avoids permitting delays and allows for immediate large-scale point-source carbon capture and storage for industrial emissions gives Exxon a key "first mover" advantage in this market. Exxon is also positioning itself to offer a reliable, low-cost and end-to-end carbon capture and storage solution for clients, as well as enabling production of lower carbon commodities like blue hydrogen (hydrogen that utilizes carbon capture technology during production). Although this seems to be a "long game" investment for the company, it is indicative that the energy sector predicts future profitability and compelling growth in CCUS ventures.

Is CCUS here to stay?

While an extremely promising frontier in the transitioning economy, CCUS is still far from exhibiting widespread cost-effective adoption and may face strong headwinds in the coming years. Long-term factors, including competition from other clean technologies and carbon pricing volatility, could affect market demand for CCUS over time. Regulatory support for projects could also waver in line with shifting policy support and it is not yet clear if there is an economic case for the use of unsubsidized CCUS given the high cost of implementation.

Sometimes touted as a "silver bullet" to achieve net zero goals, investors and issuers will need to navigate conversations around CCUS technology while still prioritizing initiatives that will reduce operational emissions. Ultimately, we will need to ensure that CCUS is not being over-relied on and that related investments will generate appropriate and durable returns.

Despite the risks, its growth potential, applicability to some of our highest emitters, early uptake by key players and policy support makes CCUS a worthwhile exploration for issuers and investors.

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