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WHITE PAPER

August 2025

Carbon Capture Utilization and Storage in the United States

In July, Jones Day released a *White Paper* titled, "CCUS Regulation and Incentives in the Asia-Pacific Region: A Comparative Table for Strategic Decision-Making." This *White Paper* is a continuation on that topic, covering carbon capture utilization and storage ("CCUS") in the United States.

This *White Paper* will explore:

- Recent developments;
- Opportunities and risks; and
- Future outlook in the United States.

RECENT DEVELOPMENTS

Presidential Support

The current presidential administration has expressed its continued support for the expansion of carbon capture and sequestration policies through executive orders and declaring a national energy emergency. Through these, the president has directed federal agencies to eliminate delays and expedite processing of federal permits.[1]

Extension of Tax Credits

The "One Big Beautiful Bill Act" signed into law on July 4, 2025, reaffirmed bipartisan support for preserving or increasing the federal Section 45Q tax credits for CCUS. The bill maintained the 45Q tax credit for geologic storage for point source and direct air capture at $85/ton and $180/ton respectively, but tax credits for captured carbon utilized in enhanced recovery of oil or natural gas were markedly increased. Enhanced recovery tax credits are now identical to those for geologic storage. The bill also maintained the transferability of tax credits, but added new Foreign Entity of Concern ("FEOC") rules. The FEOC rules prohibit taxpayers from benefitting from 45Q tax credits if they have certain disqualifying connections with China, Russia, Iran, or North Korea.[2]

Cuts to Planned Facilities

Although the new administration has expressed support to CCUS technology and development, the Department of Energy announced it is cutting funding for 10 CCUS projects in May 2025.[3] Still, there are approximately 276 planned CCUS projects announced throughout the United States.[4]

State Primacy

The Environmental Protection Agency ("EPA") has sole authority for issuing permits for Class VI wells. This class of wells are dedicated to geologic storage. A state may apply to the EPA for primacy through its Underground Injection Control Program if it can demonstrate its state-level program is at least as stringent as federal standards. The EPA recently granted Louisiana and West Virginia primacy. These states join North Dakota and Wyoming as states that can grant permits for Class I-VI wells within their borders.[5] Texas[6] and Arizona[7] have also applied for primacy, and their applications are expected to be approved later this year after the conclusion of the EPA's required notice-and-comment period.

Pipeline Moratorium

The current administration has sought to ease some regulations for pipelines dedicated to carbon storage.[8] Nevertheless, some states have placed a moratorium on pipelines. For example, Illinois adopted a two-year moratorium lasting until July 2026.[9]

OPPORTUNITIES AND RISKS

Southern States

Southern states, including Alabama, Arkansas, Florida, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia, are the most promising locations for both enhanced recovery and geologic storage due to the amount of carbon emissions they produce and their proximity to saline aquifers or oil wells. These states produce at least 50% of all carbon emissions in the country and have extensive potential storage capacity for both geologic and enhanced recovery. However, overcoming permitting bottlenecks will be critical to realizing the region's full potential.[10]

Other U.S. Locations

North Dakota, Wyoming, West Virginia, Illinois, and coastal Georgia[11] all represent states with significant geologic storage potential. North Dakota granted Summit Carbon Solutions a permit to transport captured CO2 to the state for permanent storage, establishing a center in the state for enhanced recovery capabilities.[12] As previously noted, North Dakota, Wyoming, and West Virginia are able to grant well permits and avoid the EPA bottleneck. Georgia presently has no CCUS facilities yet has one of the largest coastal basins which, if developed, could provide geologic storage for carbon.[13]

Economic Growth

The Department of Energy has stated[14] that every dollar of federal support for carbon management projects can generate up to $4 of economic activity.[15] Some estimate that with continued development of CCUS technology, it could become a $200 billion per year industry and create more than 700 jobs annually. In fact, the National Energy Technology Laboratory and the United Association of Union Plumbers and Pipefitters have established various initiatives designed to train students in the career field due to expected growth.[16]

Permit Timelines

Although the EPA has estimated it will take two-and-a-half years for a Class VI well permit to be approved, there is reason to believe that this timeline will be reduced because of the current administration's directive to expedite processing and more states being granted primacy. Prior to Louisiana being granted primacy in late 2023, more than 30% of the federal permit queue consisted of requests in Louisiana. Once a state is granted primacy, its permit timeline is significantly reduced compared to the EPA's timeline. For example, North Dakota and Wyoming have reduced their permit times to an average of 10 and 15 months, respectively.[17]

Enhanced Recovery

The increase in tax credits for enhanced recovery may demonstrate that this current administration values an affordable and reliable energy supply via fossil fuels while integrating CCUS technology.[18] Enhanced oil recovery uses 80% of all carbon captured in the United States and provides a clear revenue stream as the captured carbon becomes a commodity to sell. This administration's policies could see that market share increase. Further, the increased tax credit for enhanced recovery may allow companies to continue their carbon capture activities even if global oil prices decline.[19]

Initial and Foreign Investment

It is estimated that to build a full underground injection capture network capable of capturing 1-1.7 billion metric tons of carbon emissions by 2050, it would cost $13 billion in preliminary investments.[20] Despite positive economic growth figures, investors may be wary of investing given the EPA's recent cuts to planned projects. The new restrictions on 45Q tax credits for FEOCs may also restrict the amount of foreign capital available for investment.

Greater Economic Factors

Global oil prices previously had a negative impact on enhanced recovery operations. For example, one company suspended its operations in 2020 for three years when oil prices plummeted. It is estimated that global oil prices need to remain at least at $75 per barrel for companies to maintain their carbon capture operations.[21] However, this estimate was provided before 45Q tax credits were increased for enhanced recovery; thus, companies may now be able to maintain their carbon capture operations even in the face of lower oil prices. Inflation and higher interest rates may also impact CCUS project investment decisions. It is estimated that capital costs are up 30% due to inflation and interest rates which erode the value of tax credits.[22]

Pipelines

Unlike interstate natural gas pipelines where the federal government has siting authority, pipelines for captured carbon siting and permitting occur on a state-by-state basis, subject to their own regulations.[23] This limits the effectiveness of any regulation easing by the federal government. In fact, pipeline opposition in some states has caused some companies to withdraw their permit applications.[24]

Geologic Storage Property Rights and Liability

States generally follow the "American Rule" where the land's surface owner is the owner of the subsurface geologic storage space. This is viewed as a positive compared to the "English Rule," where the owner of the mineral rights also owns the geologic storage. However, there are liability concerns for long-term storage of carbon in the event carbon escapes, and there is no uniform answer across the states. Some states have addressed this concern by agreeing to accept ownership of the site at a later date.[25]

FUTURE OUTLOOK

Offshore Storage

The vast majority of carbon storage in the United States is onshore. However, offshore drilling and storage could address many of the concerns with CCUS. The capacity for both enhanced recovery and geologic storage is greater offshore, and drilling in state or federally owned waters means there are fewer landowners or agencies to coordinate with. Louisiana and Texas are among the first states considering increasing offshore storage, but fewer than 10% of current well permit applications are for offshore operations.[26]

Global Priorities

While the current administration is using carbon capture to prioritize enhanced recovery of oil, the global energy policy may not align with continued reliance on fossil fuels. Some view the continued use of fossil fuels as controversial and are seeking alternative energy sources. Previous administrations were more aligned with the wider global view of moving away

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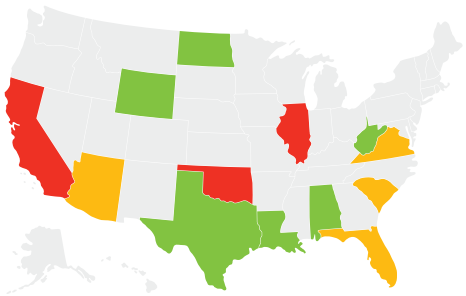
STATE CCUS HIGHLIGHTS IN THE UNITED STATES[29]

We set out below a traffic light report for key states in the United States.

- No to low levels of policy developments (not ready to go)
- Low to medium levels of policy developments (almost ready to go)
- Established regulations (generally ready to go)



We set out below a traffic light report for key states in the United States, with **RED** indicating no to low levels of policy developments (not ready-to-go), **YELLOW** for low to medium levels of policy developments (almost ready-to-go), and **GREEN** for established regulations (generally ready-to-go).

State	Regulatory/Policy Developments
Alabama	• Enacted bill in 2024 establishing a framework for carbon storage using underground injection.
North Dakota	• Granted primacy by the EPA. • Has the capability to store carbon under more than 90% of its land and has operational enhanced recovery and geologic storage facilities.
Wyoming	• One of the first two states to be granted primacy by the EPA. • Has established enhanced recovery and geologic storage facilities.
Louisiana	• Granted primacy at the end of 2023 and at the time had more than 30% of pending Class VI well permit applications before the EPA. There are a significant number of planned geologic storage facilities that should be approved at a more rapid pace now that it has been granted primacy. • It should be noted that 16 bills in Louisiana were discussed limiting carbon sequestration, suggesting that public opinion is swaying against CCUS expansion in the state.
West Virginia	• Most recent state to be granted primacy by the EPA. • Geologic storage capacity covers the entirety of the state, and it could serve as one of the next hot spots due to this capacity.

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State	Regulatory/Policy Developments
Texas	• Expected to be granted primacy within 2025. • Currently has 54 Class VI well applications under review by the EPA. • Has a number of operational enhanced recovery facilities and several planned geologic storage operations.
Arizona	• Expected to be granted primacy this year, but it has markedly less geologic carbon storage capacity than other states. • Further, part of the lands with carbon storage capacity runs through Native American Reservation land and may pose concerns.
Florida	• Governor DeSantis spoke out against carbon sequestration, but others in the state legislature believe it has potential. • The Tampa Electric Company has submitted an application to the EPA for three underground wells.
South Carolina	• Released a report recommending increasing carbon sequestration and storage mechanisms in the state.
Virginia	• Began developing a CO2 storage hub, but the project is still in its early stages.
California	• Currently has a moratorium on pipelines, so all planned CCUS facilities are limited to areas within the central storage pocket.
Illinois	• Currently has a pipeline moratorium until July 2026 which prevents it from transporting carbon for storage.
Oklahoma	• CapturePoint withdrew two permit applications to drill Class VI wells, stating they need at least two more years to study the area.

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ENDNOTES

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29 Opdyke, *supra n*ote 8; Clean Air Task Force, *supra* note 11.