CARBON CAPTURE COALITION

Fact Sheet

Class VI Wells

INTRODUCTION

Safe, permanent geologic storage of captured carbon dioxide (CO_2) is a critical component to scaling the broader carbon management technology ecosystem. The commercial liftoff of carbon capture and removal technologies is essential for the US to maintain and grow domestic energy supplies, support a flourishing industrial and manufacturing base, protect and increase family-sustaining jobs, and preserve America's role as a global technology innovation leader.

Commercial interest in carbon management technologies is growing rapidly thanks to strong bipartisan federal support for the nationwide deployment of these technologies, including historic investments made in the Infrastructure Investment and Jobs Act (IIJA), and significant enhancements made to the federal Section 45Q tax credit. Today, a majority of the more than 270 announced domestic projects across the carbon management value chain intend to store captured CO_2 in saline geologic formations. Carbon storage, and robust regulatory programs, efficient and time-effective permitting processes are the lynchpin to enabling current and future projects.

Class VI Wells Permitted

8

Pending

165

individual well permits

57

different projects

BACKGROUND

- The Environmental Protection Agency (EPA) tailored the Class VI program rules to specifically address the permanent storage of CO_2 and ensure that wells are appropriately sited, constructed, tested, monitored, funded, and closed once injection activities are completed.
- Project developers looking to store CO_2 securely underground in appropriate geologic formations must receive permits to construct Class VI wells from EPA or relevant state, territory, or Tribal Nations that have been granted primary enforcement authority, referred to as primacy, by EPA. States, territories, or Tribal Nations can be approved for primacy only if their regulations meet or exceed the EPA's Underground Injection Control Program regulations.
- As of February 2025, the EPA has permitted eight Class VI wells, with draft permits for one additional well pending. With the influx of project announcements over the last several years, as of March 2025, there are now 165 individual well permit applications for a total of 57 projects that are currently at EPA.
- Timely and rigorous review of permit applications for secure geologic storage by state and federal regulators is the lynchpin in scaling safe, reliable, and permanent sites for geologic storage of captured CO_2.

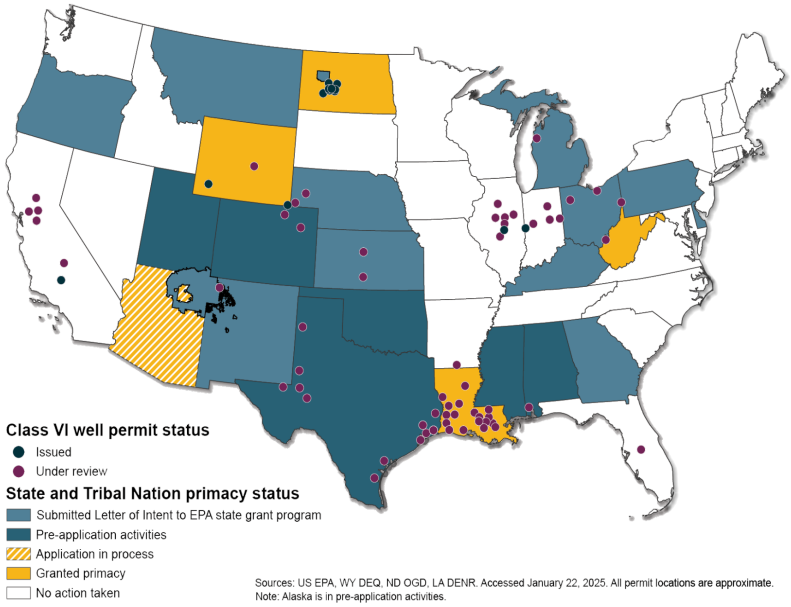
Class VI wells are used to inject CO_2 into deep geologic formations for the purpose of safely and permanently storing CO_2. Suitable geologic storage locations are separated from underground drinking water sources, typically one mile below the earth's surface, and occur below impermeable rock layers, ensuring CO_2 is permanently trapped in the target geologic formation and that underground sources of drinking water are protected.

Key takeaways to ensure that geologic storage capacity can scale to meet the anticipated need from announced projects:

- Suitable geologic formations, which include both saline and basalt formations are essential to successfully deploying carbon management technologies.
- Project developers and communities stand to benefit from tremendous economic and job opportunities in carbon management project deployment, thanks to sustained federal investments in these technologies in recent legislation.
- Robust federal funding enacted as part of annual appropriations and the IIJA will provide essential support for project deployment. This funding supports expanding the capacity of federal and state authorities to permit geologic storage, and providing funds for further geologic storage site characterization by project developers.

THE US HAS AMPLE CAPACITY TO SAFELY AND PERMANENTLY STORE CAPTURED CO_2 IN GEOLOGIC FORMATIONS

- Secure, permanent storage of CO_2 in appropriate geologic formations represents a well-understood commercial practice worldwide, with the longest operating CO_2 saline storage facility, the Sleipner carbon capture and storage project located offshore of Norway, having been in operation since 1996.
- The United States' geology offers vast potential to permanently and securely store captured carbon deep underground in appropriate geologic formations, as detailed in the US Department of Energy's (DOE) Carbon Storage Atlas. According to DOE, the country's geologic storage capacity is anywhere from 2.2 trillion to 21.2 trillion metric tons of CO_2. For context, US emissions totaled approximately 6,340 million metric tons of CO_2 in 2021 - **there is no shortage of available geologic storage.**



Sources: US EPA, WY DEQ, ND OGD, LA DENR. Accessed January 22, 2025. All permit locations are approximate.
Note: Alaska is in pre-application activities.

- In addition to more than fifty years of experience storing CO_2 in oil and gas fields, the US Department of Energy has been studying and field-testing geologic storage for over 20 years. The agency's work has overwhelmingly demonstrated that geologic storage of CO_2 is a safe and permanent practice, with a very low risk of CO_2 migrating outside the target formation when properly sited and implemented.

BUILDING ON CARBON STORAGE MOMENTUM

- Domestically, the ingredients for success are coming together — geologic storage potential, available technologies ready to deploy, and a strong foundation of supportive federal policies to ensure that carbon management projects can scale to bolster domestic energy production, onshore US industry and manufacturing, and maintain America's position as a global leader in technology innovation.
- To achieve the geologic storage capacity necessary to launch the carbon management industry toward nationwide deployment, policymakers must provide the necessary resources to regulatory authorities to enable appropriate staffing and training to build and manage robust regulatory programs. Additionally, proper regulations must be in in place to allow storage to move forward at the scale necessary to ensure these technologies can fulfil their full potential.