Environment & Energy

IRA-Driven Carbon Capture Needs Strategic Approach

By Brittany Bolen, Emily Mallen, Marc Rose, and Peter Whitfield

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Sidley Austin attorneys say that developers should proactively engage agencies in order to effectively leverage Inflation Reduction Act tax credits and federal funds for carbon capture and sequestration projects. The permitting and approval process is ripe for reform, they say.

Inflation Reduction Act tax credit reforms and federal funds are a significant change for the economics of carbon capture and sequestration projects in the US.

Yet many questions remain about how to navigate permitting approvals to get CCS projects up and running and fully realize tax and climate benefits.

The IRA's goal of quickly advancing CCS should be tempered by the extensive review of environmental and legal issues, including how to permit carbon dioxide sequestration wells, obtain pore space rights, and construct CO2 pipelines.

Developers looking to leverage IRA momentum for CCS should take a strategic approach to project approvals and proactively engage with agencies shaping this space.

Well Applications

Most CCS developers who are interested in the heightened IRA tax credits are pursuing approvals to store CO2 in deep geologic sequestration wells, or Class VI wells. These are regulated by the Environmental Protection Agency under the Safe Drinking Water Act.

Although established in 2010, the Class VI well program is still in its infancy. Only two wells have been federally approved for injection, which took upwards of six years to permit fully. EPA approvals of state applications for primacy of the Class VI program could accelerate the process, but have trailed expectations.

For instance, North Dakota—one of two states with primacy—took less than a year to approve its first-Class VI permit. Until the EPA makes progress on the more than two dozen pending Class VI well applications or grants more states primacy, uncertainty with the program may impede CCS development.

The bipartisan Infrastructure Investment and Jobs Act provided appropriations for EPA Class VI resources and assistance with state-delegated Class VI programs, but the IRA did not address Class VI wells. Absent reforms or further guidance from EPA, developers will likely focus on states with Class VI primacy or may consider storing CO2 in other wells, such as Class II wells.

An expanded area of review is one of the distinct requirements of Class VI wells compared to other wells, which can present further challenges for developers regarding the appropriate pore space.

Pore Space Storage

Pressure points surrounding pore space storage—including issues related to geology, ownership, and lease economics—were not considered in the IRA.

Project developers are tasked with identifying the optimal pore space location for a project based on proximity to expected emitters, existing and future expected capture and transmission infrastructure, size of such location given anticipated storage needs, and number and nature of landowners owning an interest in a location.

Developers must also consider whether legal ownership of the pore space is clear in the state where the well would be located, and the potential for conflict between surface and mineral interest owners' rights, including over expected tax or carbon credits.

Indeed, it is important to address these issues prior to submitting a Class VI application.

Pipelines

A viable CO2 pipeline network will also be crucial to support large-scale adoption of CCS, and the IRA is silent on the issue. Right now, fewer than 5,000 miles of pipelines are dedicated to CO2 transport, and they are limited in scope, moving CO2 from discrete natural or industrial sources to mature oil fields for enhanced oil recovery.

Some project developers are exploring how to deploy these existing systems for CCS purposes while others are considering conversions of other types of existing pipelines to transport CO2.

Developing a sufficiently sized interstate CO2 pipeline network for CCS requires regulatory certainty. First and foremost are siting concerns and whether federal or state governments will be deputized to oversee it. States currently control siting decisions.

There is no federal eminent domain, as the Federal Energy Regulatory Commission already disclaimed jurisdiction over CO2 pipelines under the Natural Gas Act.

The Surface Transportation Board is presumed by some to have jurisdiction under a statute that requires pipelines to be common carriers. Because the STB has yet to assert jurisdiction, developers are unsure how it will approach projects built with support from "anchor" shippers using long-term contractual commitments.

The federal government does have regulations in place over CO2 pipeline safety, and more robust regulations may be deemed essential. Without additional guidance, however, developers will need to continue to incorporate CO2 pipeline regulatory risk into their planning scenarios.

Staff and Funding

Beyond sequestration wells and pipelines, CCS projects funded with federal grants or otherwise triggering a major federal action will be subject to environmental reviews under the National Environmental Policy Act.

While Congress has the authority to exempt projects from NEPA, it chose not to exempt CCS projects from such review.

Instead, the IRA sought to address one reason for delay—staff shortages and resource constraints at federal agencies—through appropriations to fund "more efficient, accurate, and timely reviews for planning, permitting and approval processes."

These funds will undoubtedly address some constraints, but project developers should still anticipate lengthy environmental review periods and the potential for protracted litigation—no different than any other project.

Looking ahead, while the IRA clearly amplifies federal support for CCS, the federal review and approval process is likely to be as time-consuming as that of other large-scale industrial projects.

While agency reforms to streamline the process are possible, CCS developers eager to advance projects should heed the lessons learned from permitting challenges for other types of energy infrastructure and focus on early and meaningful engagement with regulators.

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