

The Texas Lawbook

Free Speech, Due Process and Trial by Jury

The Carbon Capture Opportunity for Midstreamers

October 22, 2021 | BY KEVIN CREWS & JARROD GAMBLE

The Global CCS Institute estimates that an additional 2,500 large-scale carbon capture (CCUS), utilization and storage facilities must become operational by 2040, and the Biden administration's Council on Environmental Quality recently determined that approximately 68,000 miles of additional pipelines are required to support the nation's net zero emissions target.

To place this opportunity into context, that figure is comparable to the pipeline mileage built for the entirety of the liquid fuels industry in the United States since the early 2000s. As such, the transition to a net-zero energy marketplace presents an unprecedented investment opportunity for midstream operators and energy infrastructure stakeholders who are willing to rise to the challenge.

Most energy stakeholders are now familiar with recent developments in carbon capture incentives, including the increased tax credits offered for CCUS projects under the amended Section 45Q of the Internal Revenue Code: (i) up to a \$35/metric ton tax credit for taxpayers disposing of qualified carbon oxide volumes through utilization or enhanced oil recovery (EOR), or (ii) up to a \$50/metric ton tax credit for taxpayers who sequester such volumes in secure geologic storage.

CCUS projects entail three essential components: (i) capturing and separating CO₂, (ii) processing and transporting the CO₂, and (iii) either utilizing the CO₂ for conversion into a material or chemical compound or injecting the CO₂ into underground formations for secure geologic storage. While capturing and storing CO₂ may seem like the most challenging of these functions, project stakeholders often find that the transportation component poses

the most issues to the viability of their CCUS project. This article will review the challenges posed by existing CO₂ infrastructure and will discuss certain commercial and legal considerations often faced by CCUS project participants.

Challenges with Existing CO₂ Infrastructure

CO₂ is typically transported in a "supercritical state" at substantially higher psi pressures than natural gas. These unique specifications make converting existing natural gas lines unfeasible since CO₂ pipelines require thicker linings, claddings and coating due an increased likelihood of corrosion. Consequently, a majority of the pipeline projects built in the coming years to transport captured CO₂ volumes must be built from scratch unless they are able to leverage existing CO₂ pipelines.

Most of the existing CO₂ pipelines in the United States were developed on a point-to-point basis to supply EOR operations throughout the Permian Basin and other prominent oil fields. Many of the existing systems connect a natural source of CO₂ supply, such as McElmo Dome, to a CO₂ EOR field, such as SACROC field in Scurry County, Texas. This existing interconnectivity creates a unique advantage for upstream and midstream companies looking to implement some form of carbon management services, such as sequestration services, into their business model. When feasible, stakeholders are encouraged to leverage the existing infrastructure in these areas. Unfortunately, stakeholders outside of these regions will likely be required to develop transportation infrastructure on a greenfield basis.



Kevin Crews



Jarrod Gamble

The Texas Lawbook

Commercial Considerations

Since the expansion of the \$45Q carbon capture credit program, there have been at least 30 new CCUS projects announced across the country. According to the Great Plains Institute, there are approximately 1,517 facilities in the United States capable of satisfying the requirements of a “Qualified Facility” under \$45Q regulations.

When planning a CCUS project, it is important to remember that not all emission sources are created equally. Certain emission streams, such as those emitted from gas processing facilities, ethanol plants and ammonia facilities, produce emission streams that may be transported by pipeline with minimal processing costs. The cost of capture and treatment for these facilities is often substantially lower than those associated with coal fired power plants, cement manufacturing facilities and petrochemical plants. Accordingly, these low-cost facilities are often highly sought after among stakeholders actively developing CCUS projects.

In light of the limited number of low-cost facilities available, project developers are encouraged to begin discussions with suitable commercial partners sooner rather than later. Facility owners are often willing to grant an exclusivity period during the front-end engineering and design phases of the project. This can be helpful, as it provides stakeholders time to plan other important logistical considerations such as pipeline siting and storage site locations while they explore the feasibility of retrofitting a specific emissions facility with capture equipment.

Legal Considerations

After project stakeholders have identified the participants of their CCUS project, the next major project considerations are the ownership of the capture equipment and the allocation of \$45Q credits (or other environmental attributes) amongst the project participants. Under \$45Q, the taxpayer owning the capture equipment is the party entitled to generate credits.

The regulations provide that the capture equipment owner may assign some or all of its credits to a party contractually obligated to dispose of the captured emissions through secure geologic storage. Generally, the allocation is driven by whether the project participant is willing to participate in the cost to build out the capture facility and associated transportation infrastructure. In most cases, if multiple project participants are willing to participate in the cost to construct the capture facility, then a special ProjectCo will be formed to own and operate the capture

facility and the credits will be allocated in accordance with the equity ownership of the ProjectCo.

In some instances, project participants will not have an interest in receiving \$45Q credits, and in those instances, the capture facility owner will typically enter into sales and/or services contracts with the emission facility owner and the sequestration service provider respectively.

Some emission facility owners and sequestration service providers are able to negotiate for the right to receive an annual payment for some portion of the credits generated from the facility by the capture facility owner in addition to the sales price or service fee they were able to negotiate in their respective agreements. However, this often varies on a project-by-project basis as the allocation of economic credits are often one of the more heavily negotiated deal points of the CCUS project.

CCUS projects entail a great deal of interdependency among each component of the project. For instance, if the project stakeholders anticipate generating a certain threshold of credits each year, unexpected facility downtime may impact the overall economic viability of the project. Similarly, if the project economics include the sale of hydrocarbons in connection with EOR operations, then stakeholders may face commodity price exposure unless they are willing to hedge or long-term offtake the production volumes associated with the project. Project permitting and the EPA's monitoring, reporting and verification (MRV) requirements also pose significant interdependency issues for CCUS projects.

Permitting the sequestration component of the project can require significant lead time prior to the commencement of injection operations depending upon the type of injection and jurisdiction of the storage site. In addition to the permitting requirements, there are also numerous MRV disclosures that must be filed with various governmental agencies on an annual basis. A majority of the permitting and MRV requirements will be the responsibility of the party conducting sequestration services for the captured project volumes.

However, the failure to comply with these requirements may bar the capture facility owner from generating credits in connection with the project. Consequently, stakeholders often include mutual cooperation covenants regarding the preparation and filing of required project disclosures. Understanding these interdependency issues and allocating the risk and responsibility for these types of events among the appropriate project participant is of the utmost importance in the context of CCUS projects.

The Texas Lawbook

Conclusion

CCUS technology is a major part of any meaningful plan to get our society to net-zero. However, in order to make net-zero a reality, an abundance of new pipeline infrastructure is required to transport the increased volumes of captured emissions. This challenge represents a once-in-a-generation investment opportunity for midstream and infrastructure stakeholders. As noted above, there are a number of commercial and legal considerations for stakeholders pursuing CCUS projects.

For stakeholders actively evaluating these projects, we encourage regular consultation with outside counsel to ensure that the proposed project addresses these considerations in a manner consistent with the requirements set forth in §45Q as well as other state and federal regulations that may be required to claim §45Q tax credits.

*As a founding partner of the Dallas office of Kirkland & Ellis, **Kevin Crews** focuses on complex transactions including mergers and acquisitions, divestitures and private equity, with a particular focus on the energy and infrastructure sector.*

***Jarrod Gamble** is an associate in the Firm's Houston office, working on a broad range of oil and gas transactions.*