



UNDERSTANDING CARBON CAPTURE & SEQUESTRATION



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Carbon Sequestration – 3 Concepts To Know

- CCS:** The capture and underground storage (sequestration) of CO or CO₂ (CCS);
 - If the CO₂ is instead utilized, then its CCUS
- 45Q:** A tax credit provided for the sequestration of carbon “oxide” under section 45Q of the Internal Revenue Code (created Oct. 2008).
- Class VI:** The EPA designated class of well allowed to inject CO₂ into the ground;
 - Is a cousin to Class II

CCS and CCUS are often used interchangeably

What is a CCS Project?

Any effort to procure or capture CO₂ which ordinarily would be emitted and secure it permanently underground.

What Qualifies?

QUALIFIED CO₂ (OR CO) IS THAT WHICH:

- Is captured from an industrial source with carbon capture equipment.
- Would otherwise be released into the atmosphere as an emission.
- Is measured at the source of capture, and verified at the point of disposal, injection, or utilization.

QUALIFIED ASSETS MUST MEET MINIMUM ANNUAL VOLUME REQUIREMENTS:

- | | |
|------------------------------------|---------------------------|
| ▪ DAC Facility: | 1,000 MT (≈ 19.0 MMSCF) |
| ▪ Electricity Generating Facility: | 18,750 MT (≈ 356.3 MMSCF) |
| ▪ All Others: | 12,500 MT (≈ 237.6 MMSCF) |

CCUS Project Benefits

- **Tangible tax credit value (not including carbon-offset credit value)**
- **Reduction in emissions and carbon intensity scores**
- **Increased depreciation at the corporate level for project developers**

In many cases, a successful CCS project is more about managing/reducing the project risk than the benefits.

Direct Air Capture
Class VI Sequestration

Direct Air Capture
Class II EOR

Industrial
Class II EOR

Industrial
Class VI Sequestration

O&G Class II
Sequestration



O&G Formation

EOR Formation

Sequestration Formation

- Class VI Injection Well
- Class II EOR Well
- O&G Production Well

45Q Credit Value

Multiplier depends on local Department of Labor Qualifiers

- Local prevailing wage
- Local apprenticeship requirements

The multiplier is variable and NOT GUARANTEED

	Base Value \$/MT	Multiplier	Max Value \$/MT
SEQUESTRATION			
Industrial Class VI	\$17	5x	\$85
DAC Class VI	\$36	5x	\$180
Class II Disposal	\$17	5x	\$85
ENHANCED OIL/GAS RECOVERY			
Class II Injection	\$12	5x	\$60
DAC Class II	\$26	5x	\$130
UTILIZATION			
Chemo/Photo Synthesis	\$12	5x	\$60
Conversion	\$12	5x	\$60
Commercial Use	\$12	5x	\$60

DAC = Direct Air Capture

45Q: Direct Pay & Transferability

- 45Q Credits can only be claimed for 12 years
- Direct Pay: You are paid for the total credit value claimed, no matter your taxes owed
 - Example: If you sequester \$10 million of CO₂, but you owe \$1 million in taxes, you may still claim the full \$10 million
 - Applicable for the first 5 years of project life
 - Is a non-taxable source of income
- Credit Transferability: Can transfer (sell) acquired credits to other parties
 - Can transfer credits during all 12 years of project life
 - Maximum you can claim are the taxes owed - sell the rest
 - Sale value most likely will be at a 5% - 15% discount

Project Implementation

Phase I

Project financial modeling, feasibility, and fatal flaw analysis

Phase II

Stratigraphic/Exploratory Well drilling and completion to gather reservoir and geologic information (may be optional)

Phase III

Permit drafting and submission

Phase IV

Infrastructure and monitoring equipment installation, injection well installation

Foundation of Successful CCS Projects

- Operator is experienced with UIC or have a knowledgeable technical partner
- Suitable geology with long-term storage capacity
- Capital and operational costs are feasible for the company
- Financial assurance / bonding is feasible for the company
- The project is local to the generation site
- Few to no risks in the project area

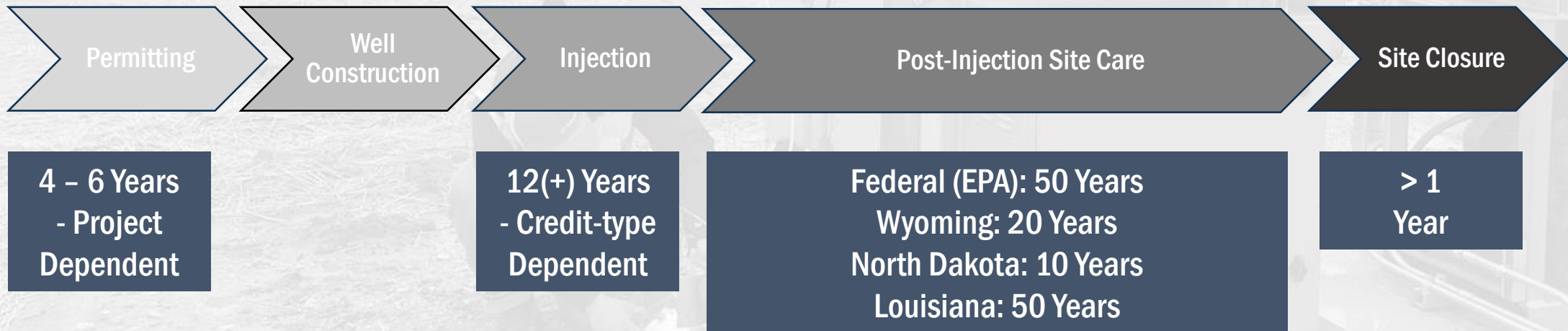
Class II vs Class VI Permitting

- Although the IRS distributes the 45Q credits, state agencies or the EPA administer injection well permits.
- The well class only pertains to the future injection well.
- Others like stratigraphic or monitor wells can be permitted through the state.

	Class VI	Class II EOR	Class II Disposal
C02 Type	Any	Any	E&P
Permitting Agency	EPA	State O&G	State O&G
Permit Timing	3-5 Years	≈ 1 Year	≈ 1 Year
Capex	\$80M - \$1B+	\$5M - \$1B+	\$5M - \$1B+
Bonding		\$10K - \$400K	\$10K - \$400K
FA	\$5M - \$100M		
MRV Plan	RR	UU / RR	RR

FA = Financial Assurance
MRV = Monitoring, Reporting, and Verification

Class VI Project Timeline



State of the CCUS Industry

- A complex regulatory environment
- Projects & Capital are asynchronous
- Geology and reservoirs are still being explored
- Political risk to infrastructure is elevated
- Sequestration permitting processes are still evolving
- State Class VI Primacy is nascent; Class II already widely adopted

CCS Projects have potential financial and corporate benefits but include risks.



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Code of the West

Trihydro adopted the “Code of the West” in 2005 as our corporate code of conduct, and we use it to guide our business each day.

1. Live Each Day With Courage
2. Take Pride in Your Work
3. Always Finish What You Start
4. Do What Has To Be Done
5. Be Tough, But Fair
6. When You Make A Promise, Keep It
7. Ride For The Brand
8. Talk Less And Say More
9. Remember That Some Things Aren't For Sale
10. Know Where To Draw The Line
11. Leave It Better Than You Found It*

