

# Carbon Capture Coalition

United States Energy Association:  
CCUS Demystified

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Christian Flinn  
Public Policy Manager



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COALITION**

# Agenda

- Why should we engage in carbon management?
  - Why should we do it now?
- What are the benefits of carbon management?

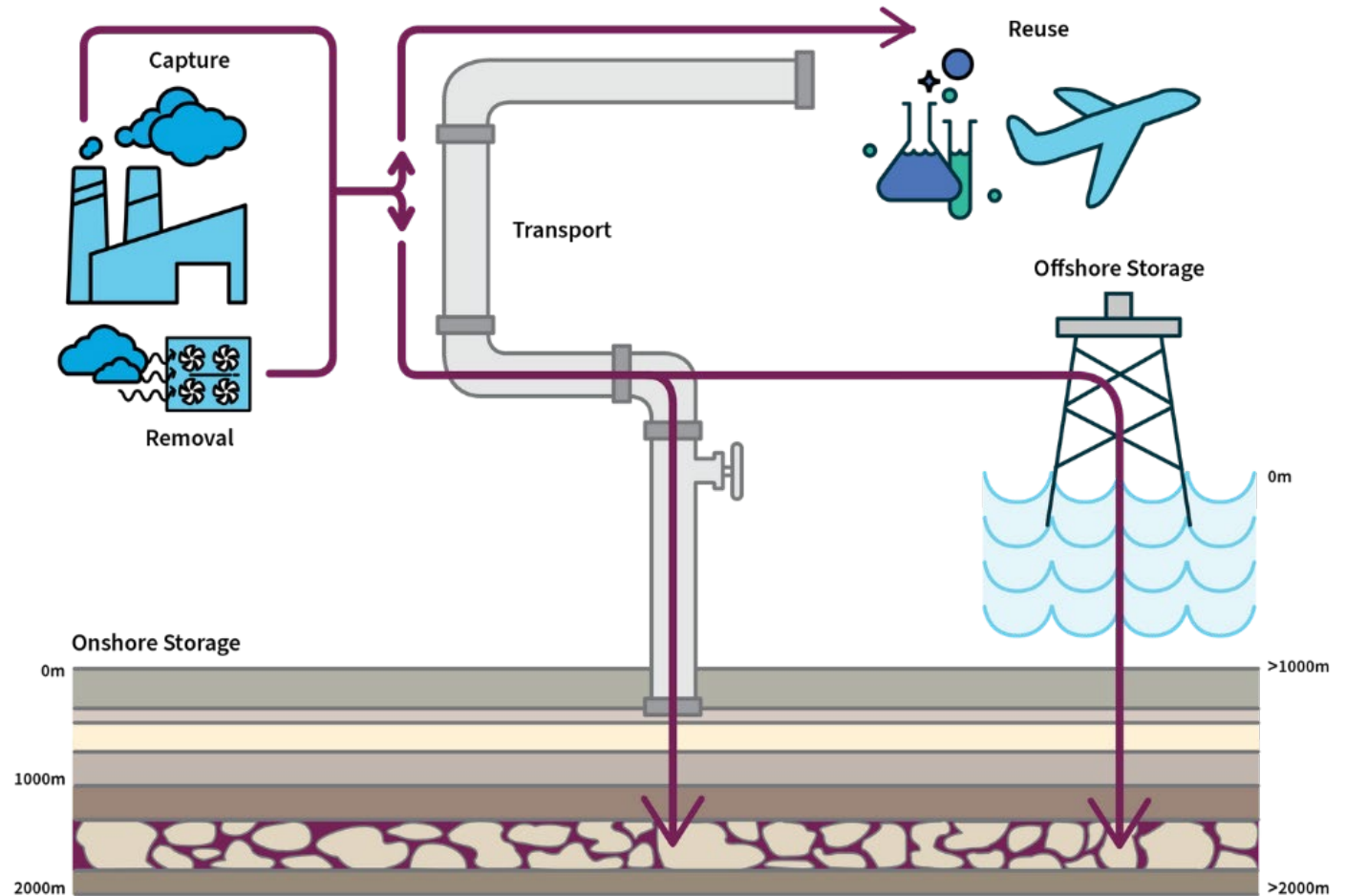


# Why should we engage in carbon management?

- ✓ Carbon management technologies are a central part of a broader federal strategy in providing affordable, reliable domestic energy for American businesses.
- ✓ Carbon management technologies enable the preservation of facilities that form the backbone of regional economies and provide family-sustaining wages.
- ✓ Staying competitive on the global stage requires commercializing innovative sustainable energy technologies and meeting the demand for less carbon-intensive products.
- ✓ Current policies and investments are not yet enough for the US to meet net-zero emissions by midcentury and keep domestic industries and energy production competitive without sacrificing economic growth.

# About the 45Q tax incentive

45Q is the foundational policy mechanism for the build-out of the domestic carbon management industry and provides a per-metric ton credit for the capture and storage, or reuse, of carbon oxides ( $\text{CO}_2$  or CO) from natural gas and coal-fired power facilities, industrial facilities, and directly from the atmosphere.

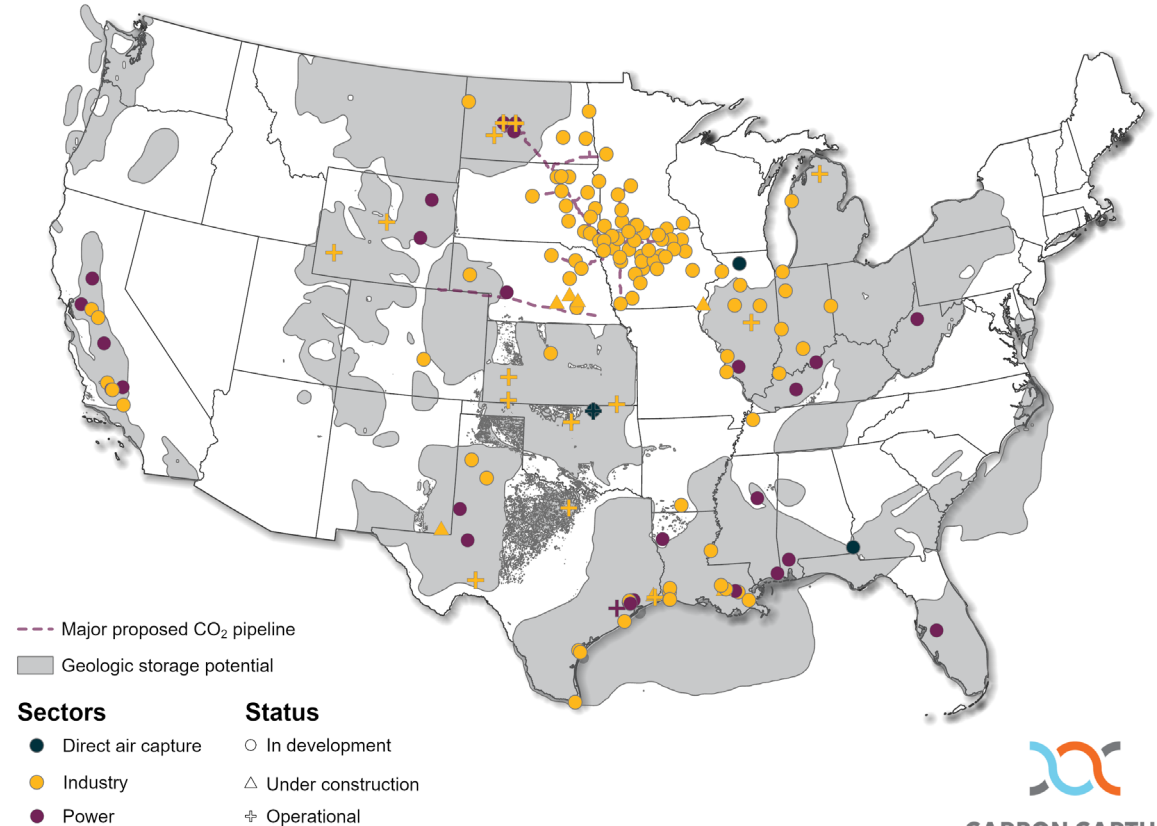


# 45Q is the foundation for nationwide deployment

Today, thanks to the bipartisan-supported 45Q tax credit and subsequent enhancements to the credit over its history, there are **more than 270 announced and operational carbon management projects across US emitting sectors and regions**. 132 of these projects are in advanced development.

Over **190** of these projects have been announced since the 2022 enhancements to the tax credit.

## Announced domestic carbon management projects



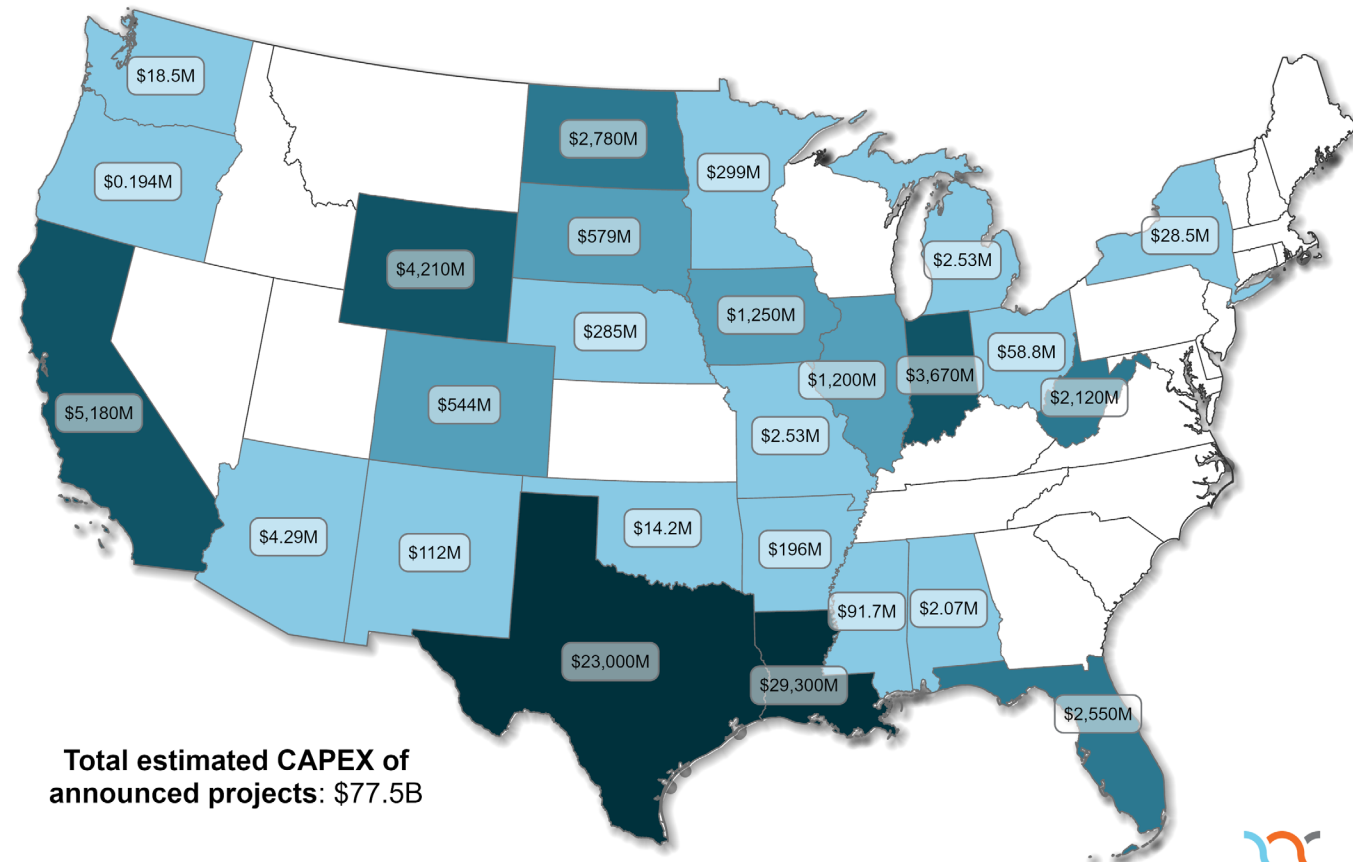
Sources: Global Status of CCS 2024, Global CCS Institute; Tailgrass Trailblazer System Map; Summit Carbon Solutions System Overview Map, Courtesy of Summit Carbon Solutions.  
Note: An additional 115 projects are not shown due to a lack of location data.

# 45Q is already driving investments

**45Q continues to deliver the appropriate market signal for projects to deploy across the nation.** It is clear that the credit is critical to ensuring that these announced projects put steel in the ground and become operational.

Providing a strong 45Q ensures that the estimated \$77.5 billion in capital expenditures (CAPEX) already invested by project developers will translate into operating carbon management projects, corresponding jobs, and additional economic benefits.

**Total estimated capital expenditures of announced carbon management projects through the end of 2024**



**Total estimated CAPEX of announced projects: \$77.5B**



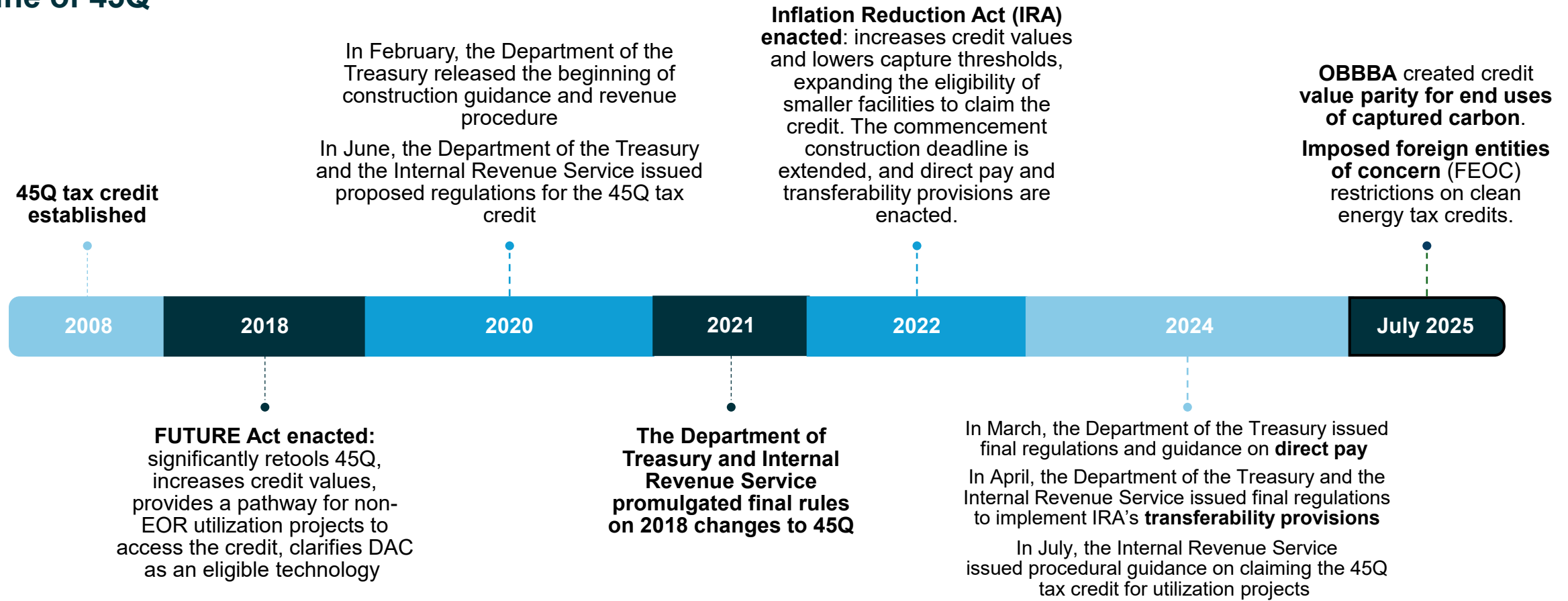
Source: Estimated CAPEX for announced projects in carbon management and related projects. Q4 2016 through Q4 2024. Clean Investment Monitor. Accessed 5/7/2025.  
Note: Alaska and Hawaii do not have actual investments reported.



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# 45Q provides an important market signal for commercial deployment

## Timeline of 45Q



# OBBBA provides end-use parity under 45Q

CO <sub>2</sub> End-Use	Credit Values Under the 2018 FUTURE Act	Credit Values Under the Inflation Reduction Act	Credit Values Under the One Big Beautiful Bill Act
For dedicated secure geologic storage of CO <sub>2</sub> in <b>saline or other, geologic formations</b>	<b>\$50/metric ton</b> for CO <sub>2</sub> captured from industry, power, and direct air capture	<b>\$85/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$180/metric ton</b> for direct air capture	<b>\$85/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$180/metric ton</b> for direct air capture
For <b>carbon reuse projects</b> to convert carbon into useful products (e.g., fuels, chemicals, products)	<b>\$35/metric ton</b> for CO <sub>2</sub> captured from industry, power, and direct air capture	<b>\$60/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$130/metric ton</b> for direct air capture	<b>\$85/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$180/metric ton</b> for direct air capture
For secure geologic storage of CO <sub>2</sub> in <b>oil and gas fields</b>	<b>\$35/metric ton</b> for CO <sub>2</sub> captured from industry, power, and direct air capture	<b>\$60/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$130/metric ton</b> for direct air capture	<b>\$85/metric ton</b> for CO <sub>2</sub> captured from industry & power; <b>\$180/metric ton</b> for direct air capture



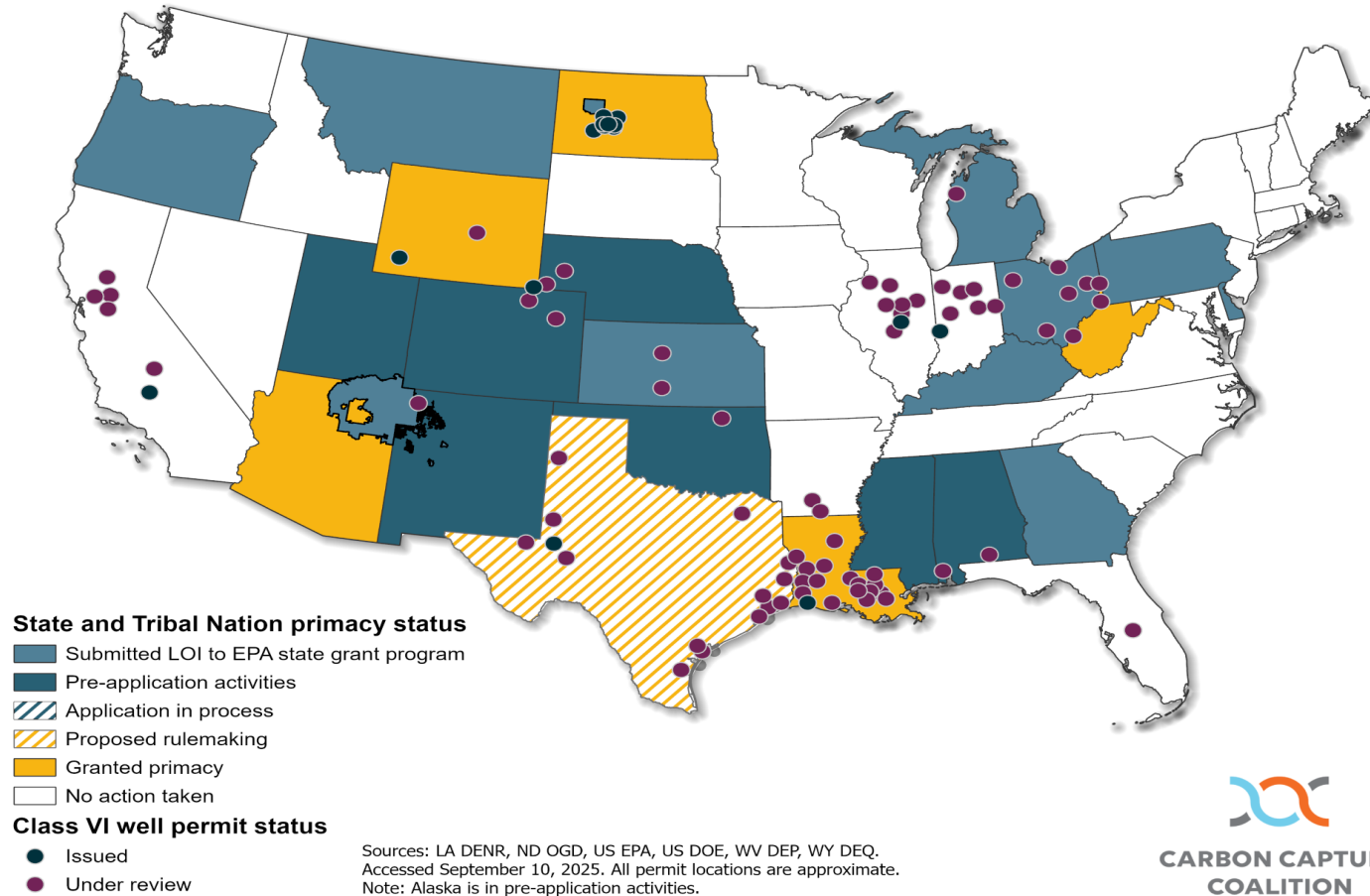
# Why should we engage in carbon management now?

- ✓ There are over 270 announced and operating CCUS projects in the US; we need to retain and further this growth moving forward.
- ✓ The One Big Beautiful Bill Act (OBBBA) preserved and slightly enhanced the 45Q tax credit, creating end-use parity under the 45Q tax credit.
- ✓ Permitting reform is now urgently needed to ensure that these announced projects can move forward to construction and operation.

# Needed permitting reform & regulations

- The current administration and Congress must issue:
  - Long-delayed rulemaking on additional safety regulations for CO<sub>2</sub> pipelines
  - Long-delayed guidance on storing CO<sub>2</sub> on federal lands
  - Regulations for CO<sub>2</sub> storage on the Outer Continental Shelf (OCS)
- Congress should establish an optional federal siting authority pathway for interstate CO<sub>2</sub> pipelines to provide similar siting parity for all linear infrastructure systems
  - The Coalition supports projects that are well served by the current state-by-state regulatory siting authority being allowed to continue that process.

# Class VI Wells



240 well applications (68 projects) are currently under review by EPA:

Completeness Review Phase	Technical Review Phase
56	172
Prepare Final Decision Phase	Final Permit Decision Issued
3	11

North Dakota, Louisiana, Wyoming, West Virginia, and Arizona, which have primacy for Class VI wells, are **currently reviewing a total of 36** Class VI project applications. They have **issued a total of 11** permits.

# What are the benefits of carbon management?

- Job creation and retention
- Supplementing clean energy initiatives and emissions reduction efforts
- Attracting investment to communities where carbon management technologies are installed
- Co-benefits in terms of better healthcare outcomes in the emitting facility host communities

# Carbon management is a job creator

Carbon capture deployment at **industrial facilities and power plants and buildout of associated CO<sub>2</sub> transport infrastructure in 21 states** across the Midwest, Great Plains, Gulf Coast and Rockies regions can support an annual average of up to **68,000 project jobs** and **35,800 ongoing operational jobs over a 15-year period**, while capturing and managing **592 million metric tons of CO<sub>2</sub> per year**.

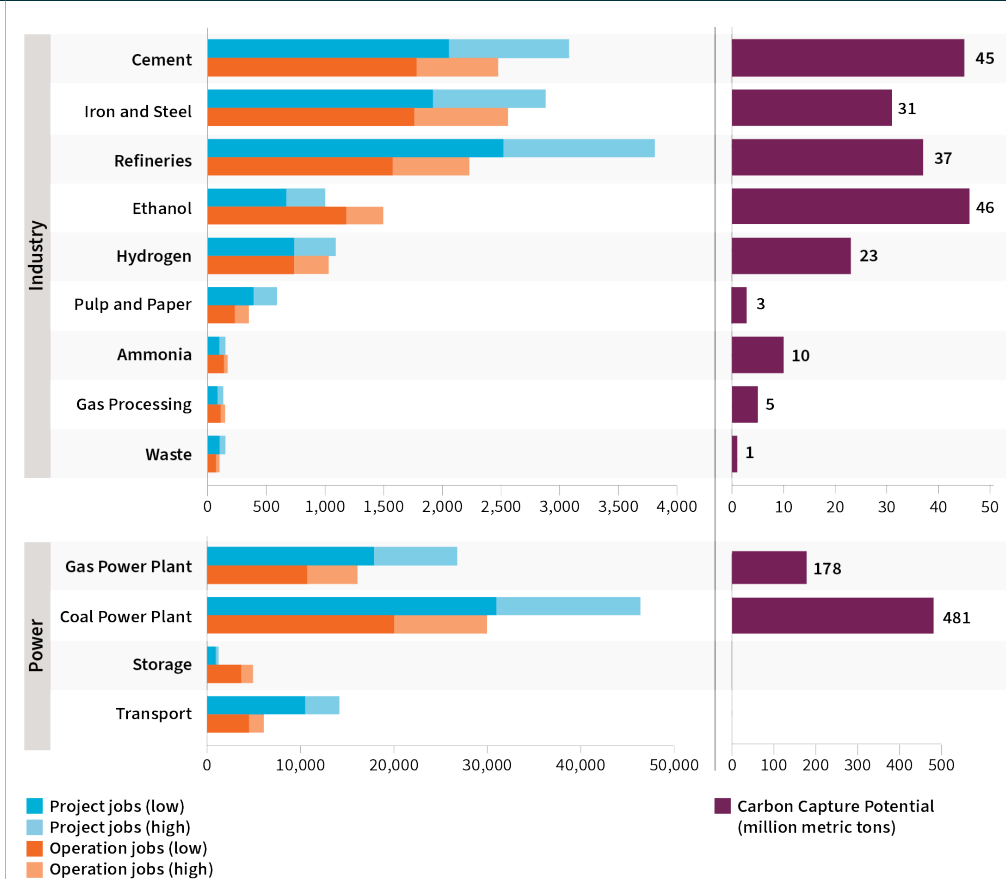
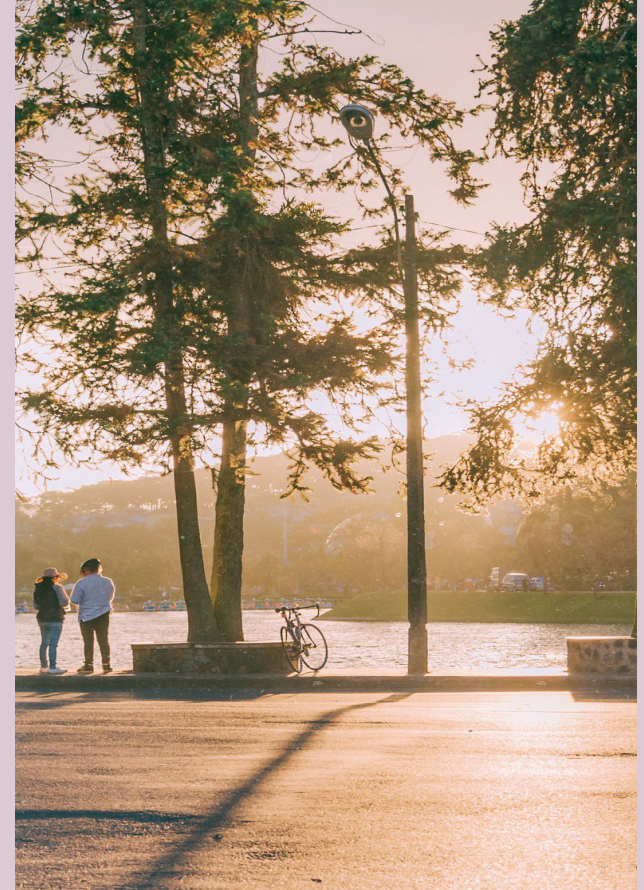


Figure 5: Near- and medium-term carbon capture jobs potential per year in the US by sector, 2023-2038.

# Carbon management's role in reducing global emissions

Two major international organizations agree that carbon management is an essential component to reduce emissions to meet climate targets while meeting global energy demand.

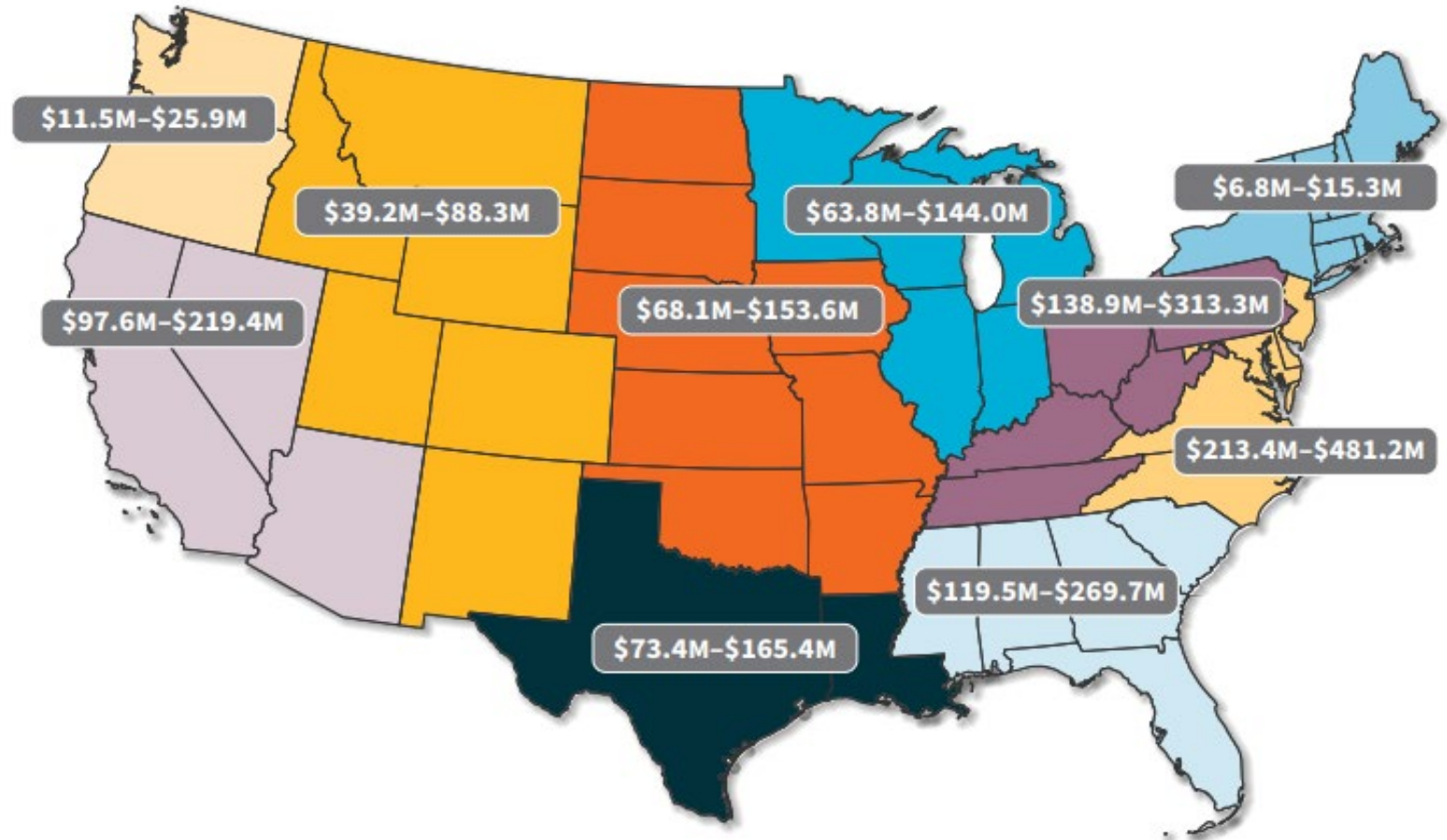
- The International Energy Agency **predicts that over 1,000 gigatons by 2030 and 6,000 gigatons by 2050 of carbon capture capacity is needed globally** to meet net-zero emission levels.
- The amount of carbon removal necessary depends on how quickly we reduce greenhouse gases across sectors and how much overshoot occurs. **The amount of carbon removal needed by midcentury ranges from 5 billion metric tons to 16 billion metric tons per year, per the IPCC.**





# Co-benefits of carbon management

Economic health benefits could range from \$347.8 million to \$1.88 billion from outfitting the 54 representative facilities with flue gas pre-treatment and carbon capture equipment.



# Thank You!



**Christian Flinn**  
Public Policy Manager  
Carbon Capture Coalition

[www.carboncapturecoalition.org](http://www.carboncapturecoalition.org)  
[cflinn@carboncapturecoalition.org](mailto:cflinn@carboncapturecoalition.org)

