





Agenda

- Introduction of panel
- Carbon Capture and Utilization overview
- CarbonQuest presentation
- Fireside chat
- Dioxycle presentation
- Fireside chat
- Audience Q&A



Panelists

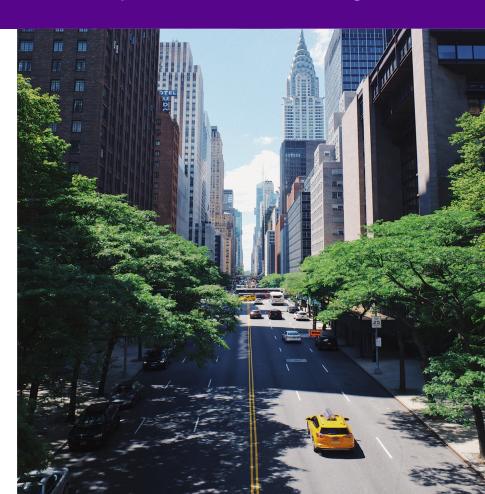
- Brian Asparro, COO of CarbonQuest
- David Wakerley, Co-Founder and CTO of Dioxycle



Carbon Capture Utilization and Storage Overview

Domain Overview

- Types of CCUS
- Historical context
- Innovations in the domain





Why is Carbon Capture Utilization + Storage (CCUS) So Important?

A way to capture emissions at the source in hard-to-abate sectors, such as oil & gas, steel, chemicals, and other sectors

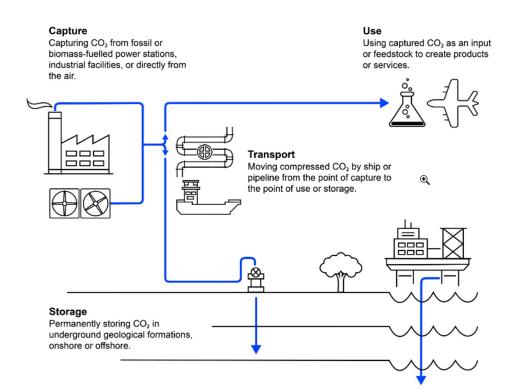
An enabler of least-cost, low-carbon hydrogen production needed for aviation, shipping, trucking, and other sectors

A way to scale carbon dioxide removal from the atmosphere

Innovation in carbon utilization is enabling radical new decarbonization pathways



How Does Carbon Capture Utilization + Storage Work?



Source: International Energy Agency



Definition of Terms

Carbon Capture and Storage (CCS)

Original umbrella term: today used mostly for point source capture and storage

Carbon Capture Utilization and Storage (CCUS)

Recent broader term reflects increasing role of carbon utilization Should encompass all but some use it for point source capture and not direct air capture

Direct Air Capture (DAC)

Carbon capture from ambient air: an emerging technology for carbon removal



1930s Natural gas producers separate CO₂ from methane

1960s

First pilot
plant for
enhanced oil
recovery
(EOR) to
increase oil
extraction

1970s

First
commercial
CCS plant
launched for
enhanced oil
recovery

1990s

Carbon
Capture &
Storage seen
as emissions
reduction tech

Direct Air Capture invented 2010s

First DAC pilot plant

utilization innovation explodes

Carbon

2020s

First commercial scale DAC plant



Point Source CCS

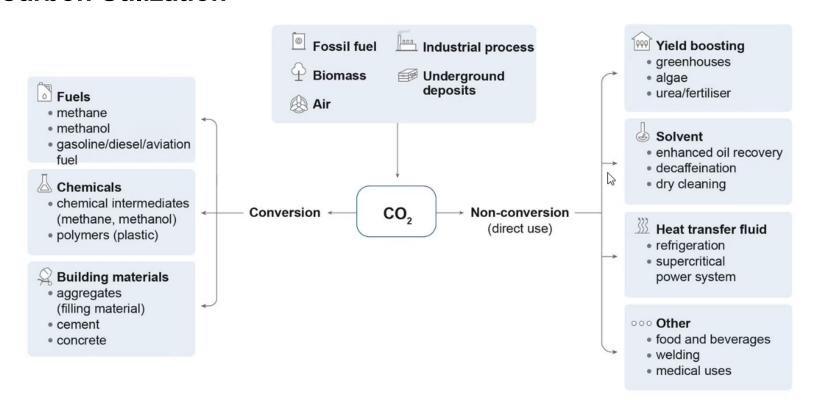
Original focus was on oil and gas fields

Point source capture is now a critical strategy and DOE policy for reducing emissions in hard-to-abate industries such as oil-and-gas, steel, concrete, and chemicals

New innovation applying point source capture outside of traditional domains CarbonQuest



Carbon Utilization





Innovations in carbon utilization today go far beyond fertilizer, additives for soft drinks and enhanced oil recovery

Innovators are pioneering new decarbonization pathways in diverse industries using carbon dioxide as a feedstock instead of petroleum derivatives to create carbon-free alternatives

Dioxycle

CarbonQuest Presentation

Dioxycle Presentation







Thank You and Stay Engaged!