



COZAIRO™

Putting away carbon for good.

Keys to Delivering Low-Carbon Ammonia

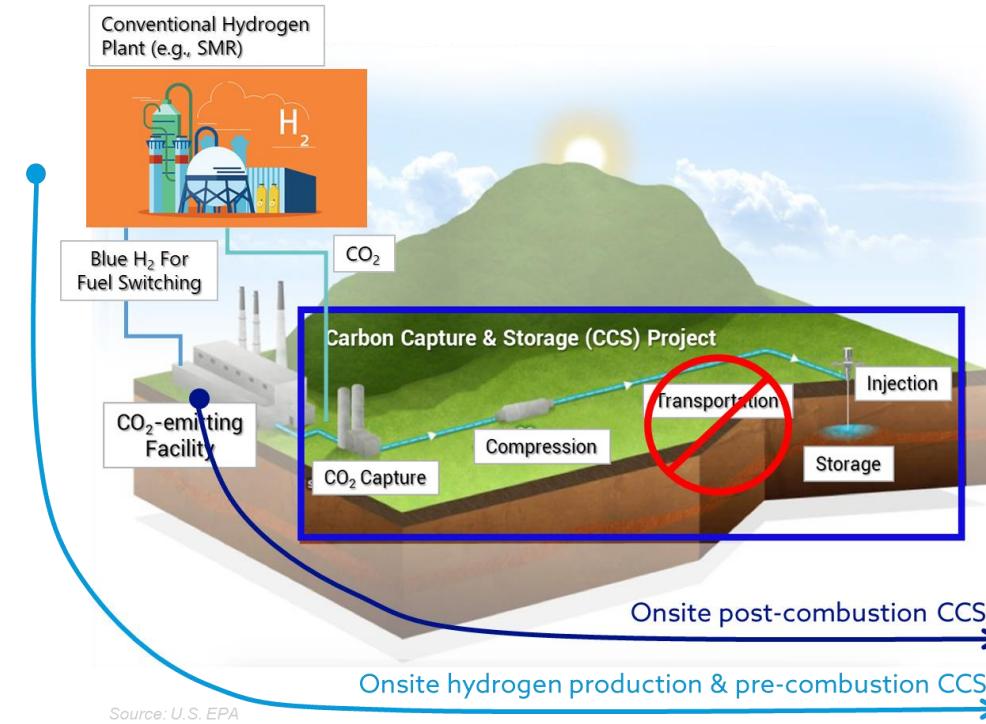
Ammonia Energy Association Conference
Phoenix, AZ 11/16/2022

Overview of Cozairo

We enable widespread industrial decarbonization as a lasting investment in our world and the people who live in it



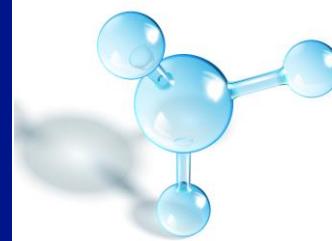
- End-to-end blue decarbonization developer
- CCUS is core competency
- Two blue decarbonization pathways



- Unique CCUS design-thru-execution experience
- Current activities span U.S. industrial sectors



Blue Ammonia



CCUS offers the U.S. ammonia sector a **unique opportunity** to decarbonize rapidly

- Low capture costs
- No technology risk
- 45Q >> project cost

CCUS delivers strong ROI today



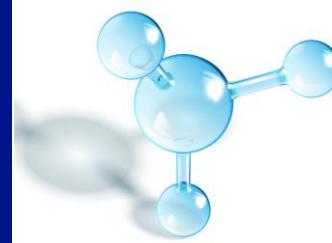
Overcoming Investment Hurdles

Blue Ammonia

CCUS offers the U.S. ammonia sector a **unique opportunity** to decarbonize rapidly

- Low capture costs
- No technology risk
- 45Q >> project cost

CCUS delivers strong ROI today



Overcoming Investment Hurdles

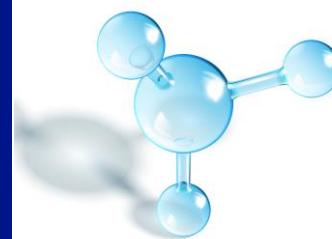
The perceived presence of **unmitigated risk** appears to be slowing CCUS projects

Blue Ammonia

CCUS offers the U.S. ammonia sector a **unique opportunity** to decarbonize rapidly

- Low capture costs
- No technology risk
- 45Q >> project cost

CCUS delivers strong ROI today



Overcoming Investment Hurdles

The *perceived* presence of **unmitigated risk** appears to be slowing CCUS projects

Execution	Commercial	Financial	Market
Right project?	Right partners?	Right investment?	Right product / time?



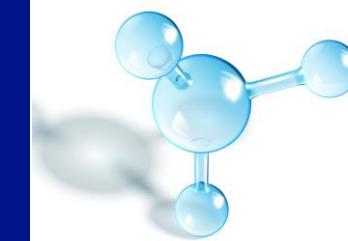
COZAIRO™

Blue Ammonia

CCUS offers the U.S. ammonia sector a **unique opportunity** to decarbonize rapidly

- Low capture costs
- No technology risk
- 45Q >> project cost

CCUS delivers strong ROI today



Overcoming Investment Hurdles

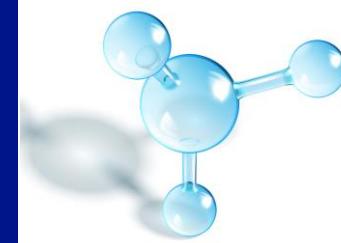


The *perceived* presence of **unmitigated risk** appears to be slowing CCUS projects

Execution	Commercial	Financial	Market
Right project?	Right partners?	Right investment?	Right product / time?

The key to enabling delivery of low-carbon ammonia is mitigation of residual risk

Building the Right Project

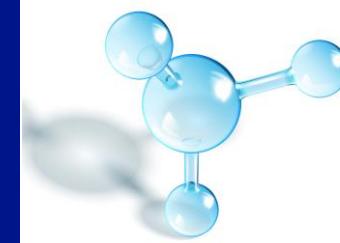


Competitive Fundamentals



Building the Right Project

Capture meaningful efficiencies

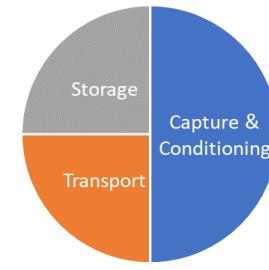


Competitive Fundamentals

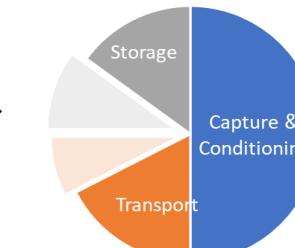


Economies of scale vs scope reduction

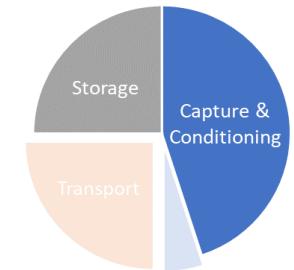
Notional Capex - Ammonia CCUS



CO₂ Pipeline Offtake Model



Onsite CO₂ Sequestration Model



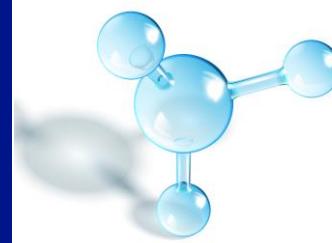
Or



Building the Right Project

Capture meaningful efficiencies

Reduce complexity

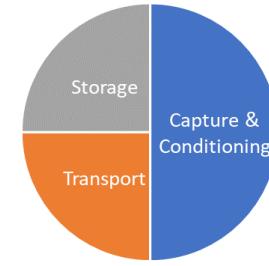


Competitive Fundamentals

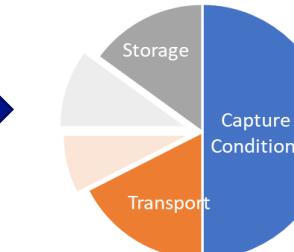


Economies of scale vs scope reduction

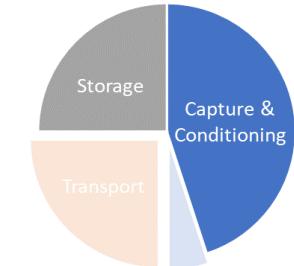
Notional Capex - Ammonia CCUS



CO₂ Pipeline Offtake Model



Onsite CO₂ Sequestration Model



Or



or



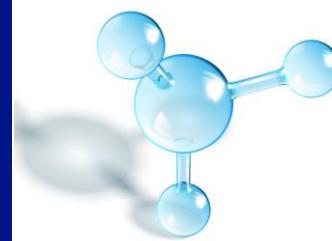
Number of working parts required for solution

Building the Right Project

Capture meaningful efficiencies

Reduce complexity

Limit dependencies

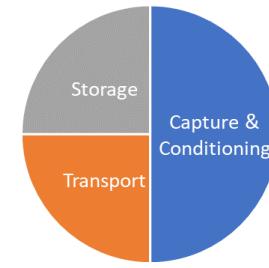


Competitive Fundamentals

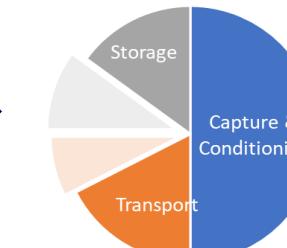


Economies of scale vs scope reduction

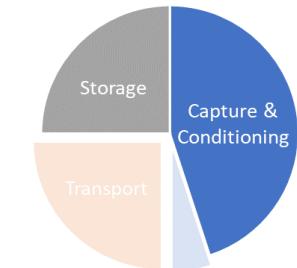
Notional Capex - Ammonia CCUS



CO₂ Pipeline Offtake Model



Onsite CO₂ Sequestration Model



Or



or



Number of working parts required for solution

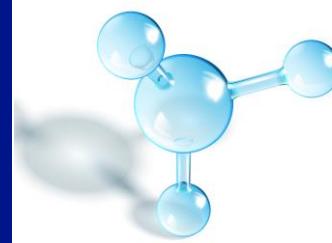
Number of parties required to progress project



or



Finding the Right Partners

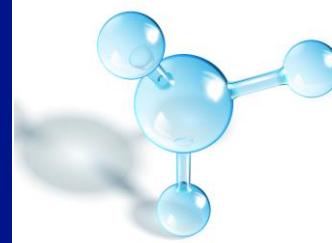


Strategic Partnering



Finding the Right Partners

Identify the integrator



Strategic Partnering

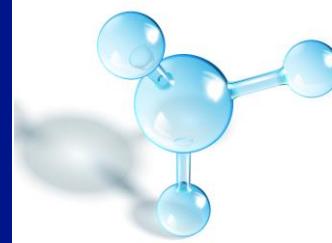


Experienced integration is key
Value is captured at the interfaces

Finding the Right Partners

Identify the integrator

Link the value chain



Strategic Partnering



Experienced integration is key
Value is captured at the interfaces

Principle of irreducible complexity
Every element must function

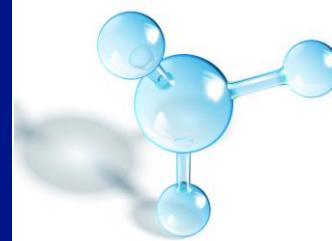


Finding the Right Partners

Identify the integrator

Link the value chain

Know your strengths



Strategic Partnering



Experienced integration is key
Value is captured at the interfaces

Principle of irreducible complexity
Every element must function



Reducing carbon footprint is a team sport
Find partners you trust, and trust them

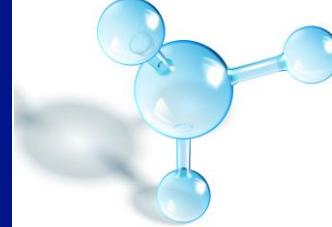
Finding the Right Partners

Identify the integrator

Link the value chain

Know your strengths

Skill over scale



Strategic Partnering



Experienced integration is key
Value is captured at the interfaces

Principle of irreducible complexity
Every element must function



Reducing carbon footprint is a team sport
Find partners you trust, and trust them

Bigger is not necessarily better
Flexibility is key



Finding the Right Partners

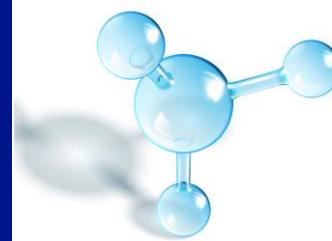
Identify the integrator

Link the value chain

Know your strengths

Skill over scale

Tailored over template



Strategic Partnering



Experienced integration is key
Value is captured at the interfaces



Principle of irreducible complexity
Every element must function



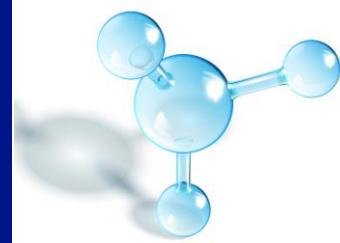
Reducing carbon footprint is a team sport
Find partners you trust, and trust them



Every decarbonization opportunity is unique
Take advantage of your differentiators

Right-sizing the investment

Right product, right time



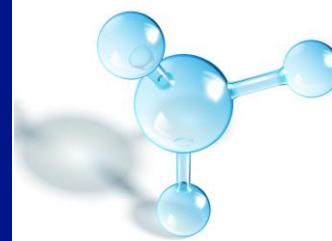
Capture Option Value



Right-sizing the investment

Right product, right time

Ask hard questions



Capture Option Value

Uncertainty highlights opportunities
e.g., product premium

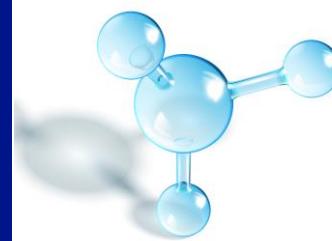


Right-sizing the investment

Right product, right time

Ask hard questions

Build financeable projects



Capture Option Value



Uncertainty highlights opportunities
e.g., product premium

Financing flexibility keeps projects moving

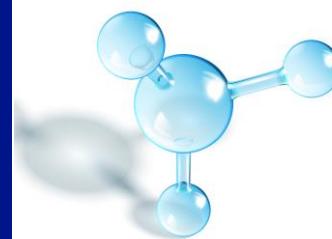
Right-sizing the investment

Right product, right time

Ask hard questions

Build financeable projects

Mature your options



Capture Option Value



Uncertainty highlights opportunities
e.g., product premium

Develop one viable, independent alternative
Optimize later

Financing flexibility keeps projects moving

Right-sizing the investment

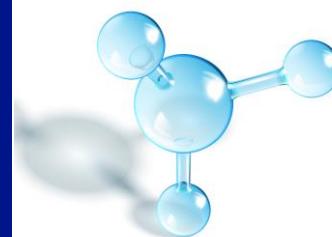
Right product, right time

Ask hard questions

Build financeable projects

Mature your options

Start now



Capture Option Value



Uncertainty highlights opportunities
e.g., product premium

Develop one viable, independent alternative
Optimize later

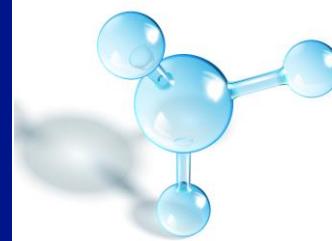
Financing flexibility keeps projects moving

Opportunity cost of delay
Highest in Ammonia sector

Blue Ammonia

We cannot afford to be left behind in a decarbonizing world

The real competitive risk is waiting to act



Overcoming Investment Hurdles



Mitigation of residual risk enables economic delivery of low-carbon ammonia

Execution	Commercial	Financial	Market
Right project	Right partners	Right investment	Right product / time

Decarbonization at a strong ROI is possible today



COZAIRO™

Putting away carbon for good.

How can we help?



COZAIRO™

Putting away carbon for good.

Background

Integrated Offering

Cozairo delivers end-to-end, full-service blue decarbonization opportunities

One-stop shop for CCS / fuel-switching

Leverages deep expertise across the carbon value chain and large-scale project management & operations capabilities

“Bridging” service model brings whatever is needed to enable projects to progress

Advantaged onsite sequestration model significantly increases accessibility



COZAIRO

Cozairo is a full-service decarbonization solutions partner, specializing in delivery of onsite carbon capture & storage (CCS) and low-carbon fuel switching projects

Blue Decarbonization Pathway Analysis

Business Case Development

Concept / CO₂ Capture Technology Selection

Technical Feasibility Studies

Onsite CO₂ Sequestration

Geologic evaluation

Subsurface design

Pore space acquisition

Class VI permitting

Well design & drilling

Operations management

CO₂ monitoring

Engineering & Project Design (pre-FEED, FEED)

Combustion system modifications

Access to Financing

Regulatory Approvals

Project Management & Execution

CCS Operations Management

Carbon Offset Monetization

Cozairo brings the whole package to our partners - capabilities that span the full value chain and project life cycle

Recent Case Studies - Enabling CCS Projects...



...in the Power Sector

- Previous studies had ruled out onsite CCS at one power generation facility, forcing the facility owner to consider building a 100-mile pipeline or abandon decarbonization plans at the site altogether.
- Our technical team applied their deep expertise in the technical evaluation and management of subsurface injection projects to the available dataset, and promptly identified four prospective zones that were missed by the previous evaluation team, each with adequate storage and injectivity to support onsite CCS.
- By removing a \$100M CO₂ pipeline from the CCS project scope, we have revived the opportunity. We are now partnering with the facility owner to complete preliminary design of an onsite sequestration project for this facility.

...in the Methanol Sector

- A Gulf Coast industrial facility located in close proximity to a residential area commenced evaluation of CO₂ capture technologies without having yet identified a viable CO₂ disposition solution. Pipeline offtake was assumed to be their only alternative.
- We introduced the concept of onsite CCS, highlighted the potential of their site, and have now completed pre-FEED studies for a sequestration project on their site sufficient to dispose of current and potential future CO₂ volumes.
- By designing a sequestration project that takes maximum advantage of site geology, our technical team was able to remove pipeline cost, significantly reduce the pore space acquisition requirements for the project while simultaneously controlling plume migration via injection well design optimizations. We also developed a pore space acquisition plan that we are now preparing to execute in partnership with the facility owner.

How can Cozairo help enable your low-carbon ammonia ambitions?

- Business case development for onsite CCS or Blue Hydrogen fuel-switching?
- Definition of onsite CCS as a commercial alternative to pipeline offtake?
- Onsite CCS project definition / technical feasibility / pore space acquisition?
- Sequestration project development partner?



COZAIRO™

The Why & How of Cozairo

Vision

We are sought after as the pre-eminent blue decarbonization partner.

Mission

Enable widespread industrial decarbonization as a lasting investment in our world and the people who live in it.

Values-Driven

Integrity. Humility. Transparency. Curiosity.

Service-Minded

Partnership. Stewardship. Accountability. Impact.

Profit-Conscious

Sustainability. Grow the Pie. Value sharing.