

Applied Technology Review

CLIMATE CHANGE
EDITION



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Cozairo

Scripting a New Chapter in Carbon Capture and Sequestration

Growing concerns about climate change are intensifying interest in advanced technologies to reduce emissions and lower the CO₂ levels in the atmosphere. To that end, carbon capture, and storage technology (CCS) offers a ready-to-execute opportunity to abate emissions across a whole host of industries around the world. Carbon capture coupled with permanent geologic sequestration is widely recognized by the scientific community as a critical component of any credible global decarbonization strategy; without it, atmospheric CO₂ content cannot be reduced sufficiently to meet climate goals. It is here that Houston-based Cozairo leverages its deep experience and full value-chain expertise to develop customized onsite “blue” decarbonization projects that deliver proven, high-impact, cost-effective solutions to meet today’s urgent emissions-reduction challenge.

“We engage clients with the goal of assisting them in decarbonizing their businesses by addressing any and all gaps that an industrial face when considering investing in a CCS project. This is one way Cozairo distinguishes itself from other service providers in the market,” says Tim Matthews, CEO of Cozairo. Houston-based Cozairo has worked with a team of energy industry veterans since its inception to develop a suite of end-to-end geologic, engineering, financing and project-based capabilities that support businesses from a variety of industrial sectors looking to decarbonize their operations.

Cozairo is at the frontlines of the energy transition, working towards its goal of being the one preferred decarbonization partner to deliver tailored, ready-to-execute onsite CCS and low-carbon fuel switching solutions. The company was founded on a simple premise: businesses across a variety of industries need help to reduce their carbon footprints sustainably.

Today, every carbon-emitting industry is evaluating both long-term clean energy solutions and immediate reduction approaches, in order to continue meeting consumer demands while satisfying corporate carbon emission targets. Backed by its competent team, Cozairo enables industrial partners to decarbonize their operations through customized onsite CCS and low-carbon fuel-switching solutions.

The fundamental issue with CCS for industrial emitters is that project economics have always been challenging due to its high cost and lack of an associated revenue stream. Recently, in the US, the federal government has enhanced existing 45Q tax legislation, which now delivers higher tax credits to companies who invest in CCS projects. Hence, industrial emitters now have increased tax incentives to work with when evaluating decarbonization via carbon-capture and storage or shifting to low-carbon “blue”

fuels. Only two true CCS projects are operational in the U.S. today; the other initiatives involve enhanced oil recovery. This makes real-world CCS project expertise a rare commodity. Having led the subsurface design, permitting, monitoring and initial operation of the first US CCS project (at ExxonMobil’s Shute Creek, WY facility), Matthews shares two recent examples where his team worked with industrial clients to identify, evaluate, and design tailored onsite CCS project solutions that have created the opportunity for economic, large-scale emissions reductions previously out of reach to their partners. “We start with the geology; where we can make onsite geologic storage

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CEO

work, we can take millions of dollars off the CCS price tag for our clients, while delivering a project opportunity they are 100 percent in control of with a long-term partner—Cozairo—that has the expertise to manage the project from conception all the way through the operating life of the project.” Cozairo experts simplify the significant challenges—cost, complexity, risks—by drawing on decades of experience in carbon capture, subsurface storage, and containment. Cozairo works with clients across industrial sectors on decarbonization solutions, including ammonia, methanol, power generation, hydrogen, cement, steel, refining & petrochemicals, and renewable diesel. “The value proposition that a full-service onsite CCS solution brings is proving to be a game-changer across industrial sectors. It means the market is large, and makes what we do very exciting to our team.”

From the original onsite feasibility study to the final stages of CCS implementation and operations, Cozairo’s team brings a vast expanse of expertise to provide turnkey solutions to decarbonize its clients’ sites in an efficient, cost-effective, and sustainable fashion. Cozairo will continue to deliver high-impact, end-to-end, onsite “blue” decarbonization projects over the long-term. ■