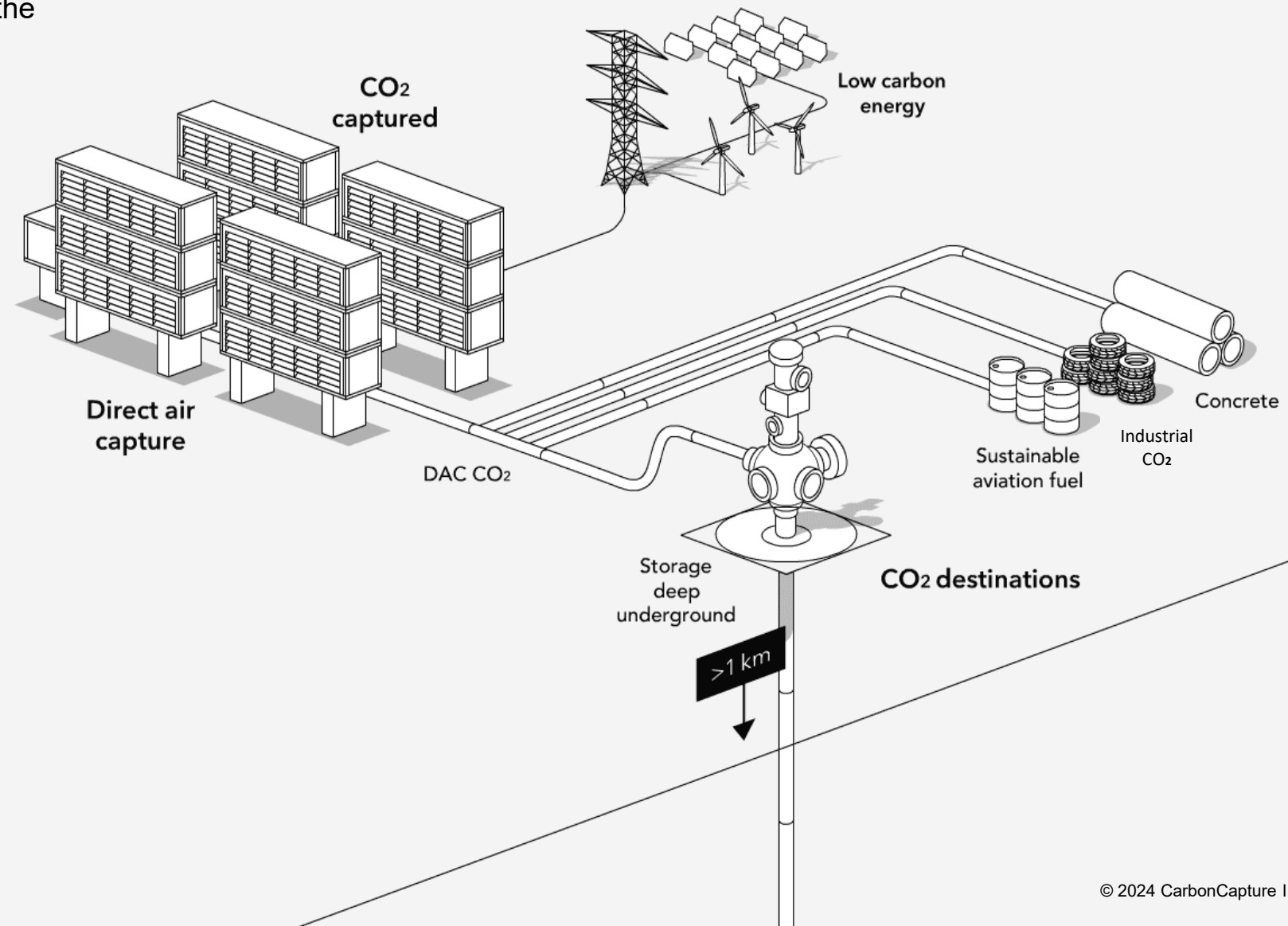
CarbonCapture™

The Role of DAC in the CCUS Ecosystem

What is DAC?

Direct air capture (DAC) is the process of removing carbon dioxide (CO_2) from the atmosphere.

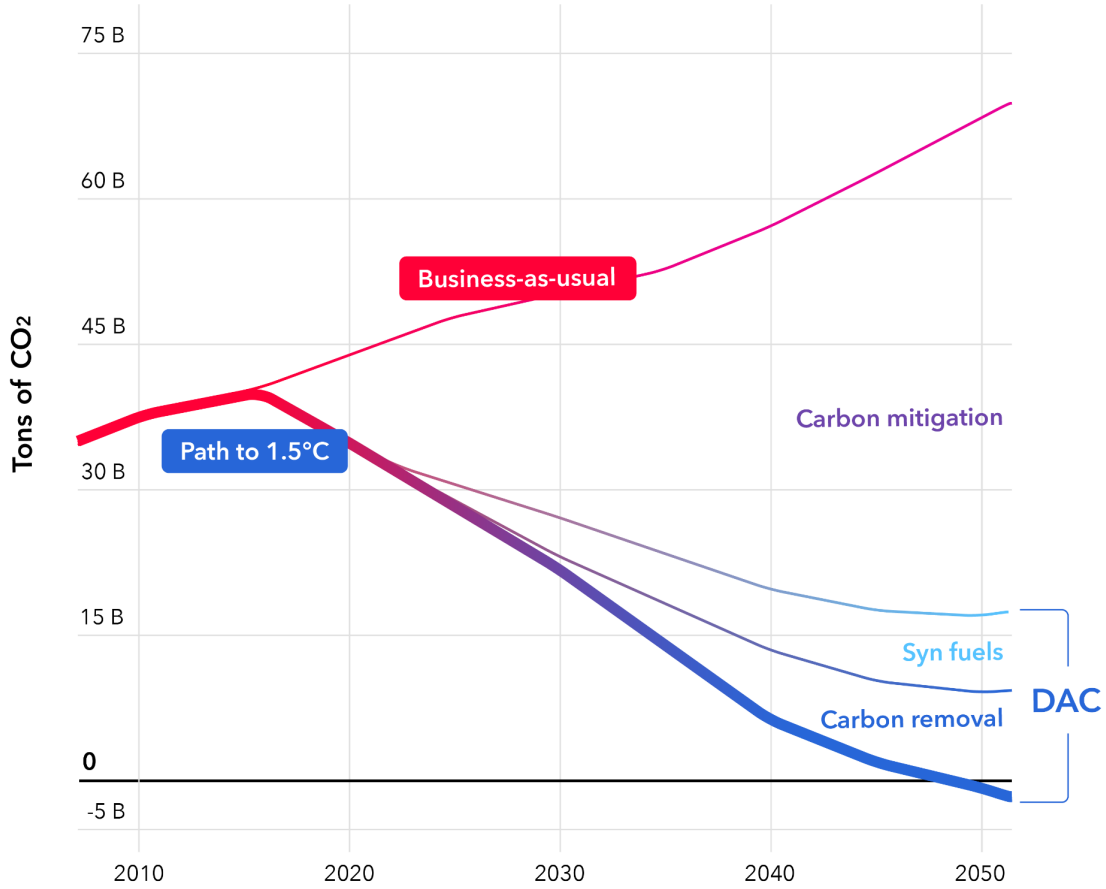


Why DAC?

To achieve net-zero emissions by 2050, Japan must foster the development of a robust carbon removal industry.

DAC will be essential in addressing both residual and historical emissions, particularly from hard-to-abate sectors where decarbonization is most challenging.

Meeting the < 1.5°C Paris Agreement goal



Sources: IPCC, Mercator, Center on Global Energy Policy at Columbia University, internal estimates

About CarbonCapture Inc.

We develop and deploy modular DAC machines designed for mass production.

- Based in Los Angeles, team of 65 and growing
- Presold >$27M in removal credits to buyers including Boston Consulting Group, Meta, and Microsoft
- $90M+ raised to date with strategic investors including Amazon, Aramco Ventures, and Siemens
- Uniquely focused on scaling DAC through materials science and manufacturing

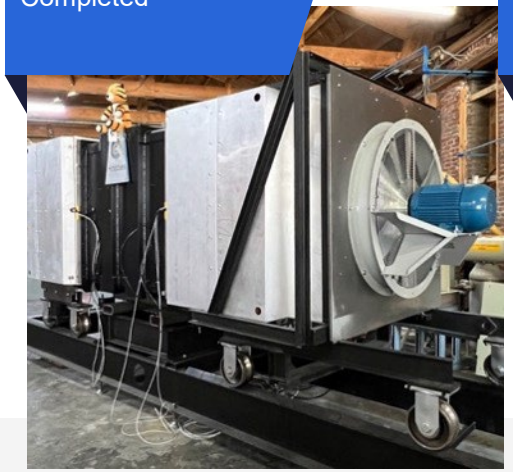
Customers

We’ve signed offtakes worth $27M from leading companies.

Technology development

- Modular, upgradable design
- Leader in sorbent development to drive improvements in performance, and reductions in cost
- 500 ton per year DAC modules currently in production

Completed



First Commercial Reactor

2022

Lab
Los Angeles

Completed
500 tpa

First Commercial Module

2024

Demonstration
Los Angeles

Executing
2,000 tpa

First Commercial Cluster

2025

CO_2 Utilization
Arizona

Please come and visit us in 2025!

Developing
20,000+ tpa

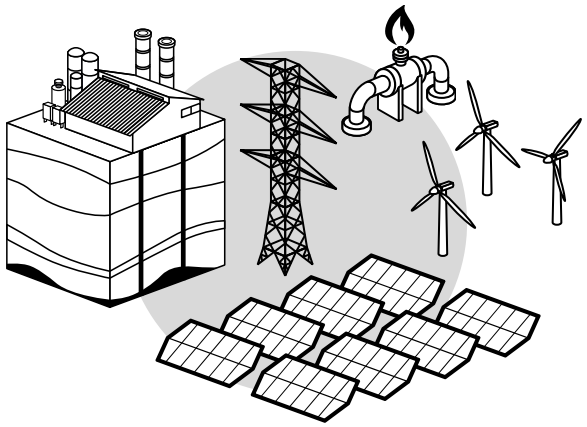
First Large-Scale Array

2027

CO_2 Storage
Louisiana

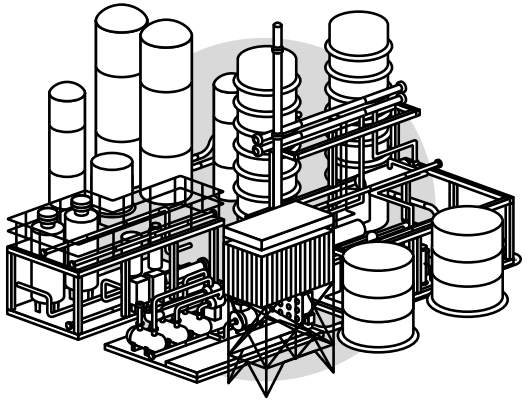
Key challenges for deploying DAC

Access to clean energy



Direct Air Capture (DAC) is energy-intensive and requires a steady supply of clean energy to ensure its climate-positive impact. This can be traditional renewables, but also geothermal or carbon capture on natural gas power plants.

Storage utilization opportunities



Captured CO_2 must be securely stored in geological formations like saline aquifers or utilized in ways that meet industrial decarbonization objectives. There must be a significant volume of utilization opportunities for CO_2 like sustainable aviation fuel or clean chemicals.

Capture and storage costs/tonne of CO_2

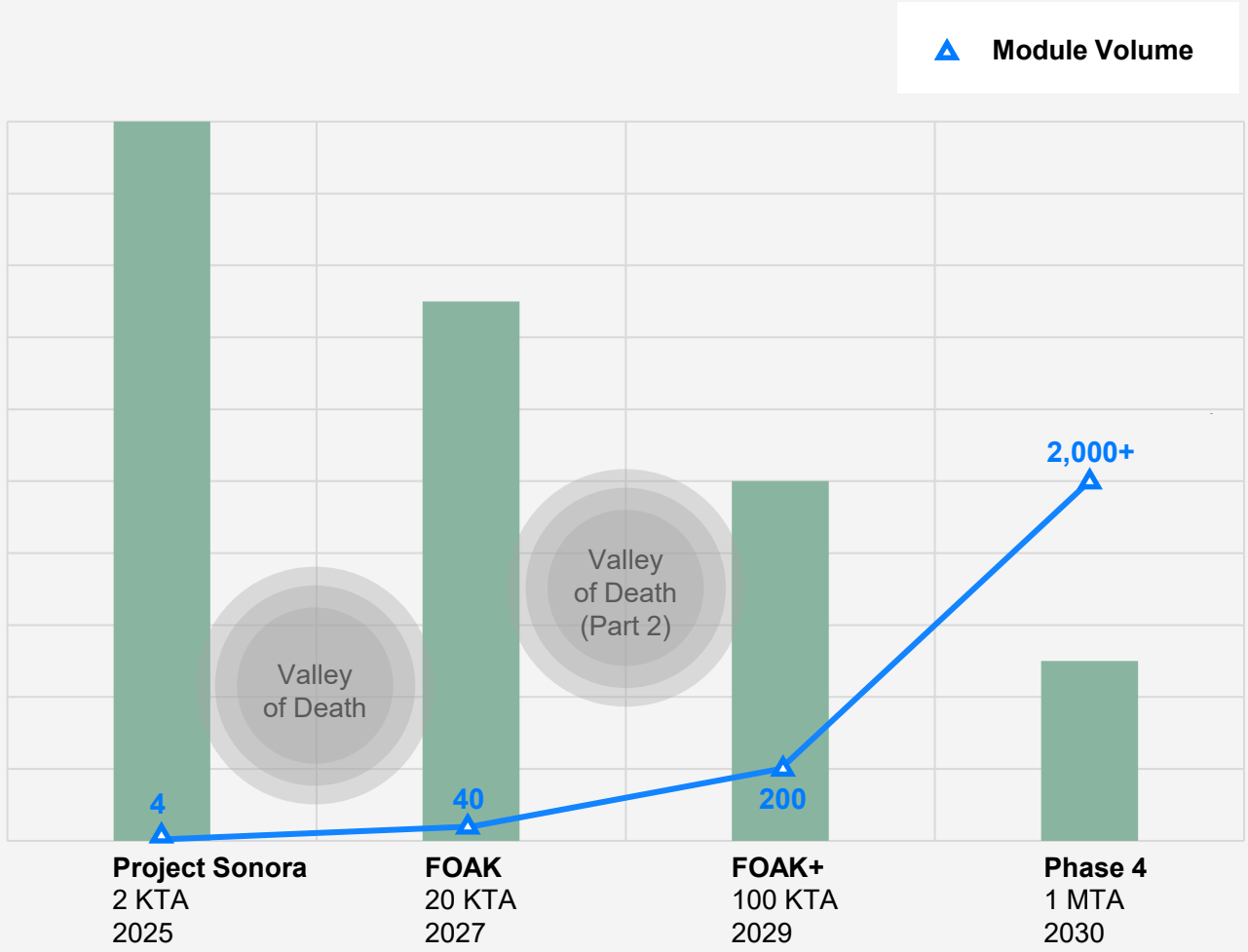
Cost reduction strategy driven by key elements:

CapEx:

- Basic module cost engineering (product simplification)
- Mass production & scaled component manufacturing
- Sourcing strategy and supply chain optimization
- Balance of plant economies of scale
- Improved system design

OpEx:

- Improved sorbent lifetime and cost
- Improved system design and operational efficiency
- Reduction in energy costs



*Indicative numbers related to planned projects; OEM sales could drive greater cost down curve

Co-locating DAC with CCUS

Shared infrastructure

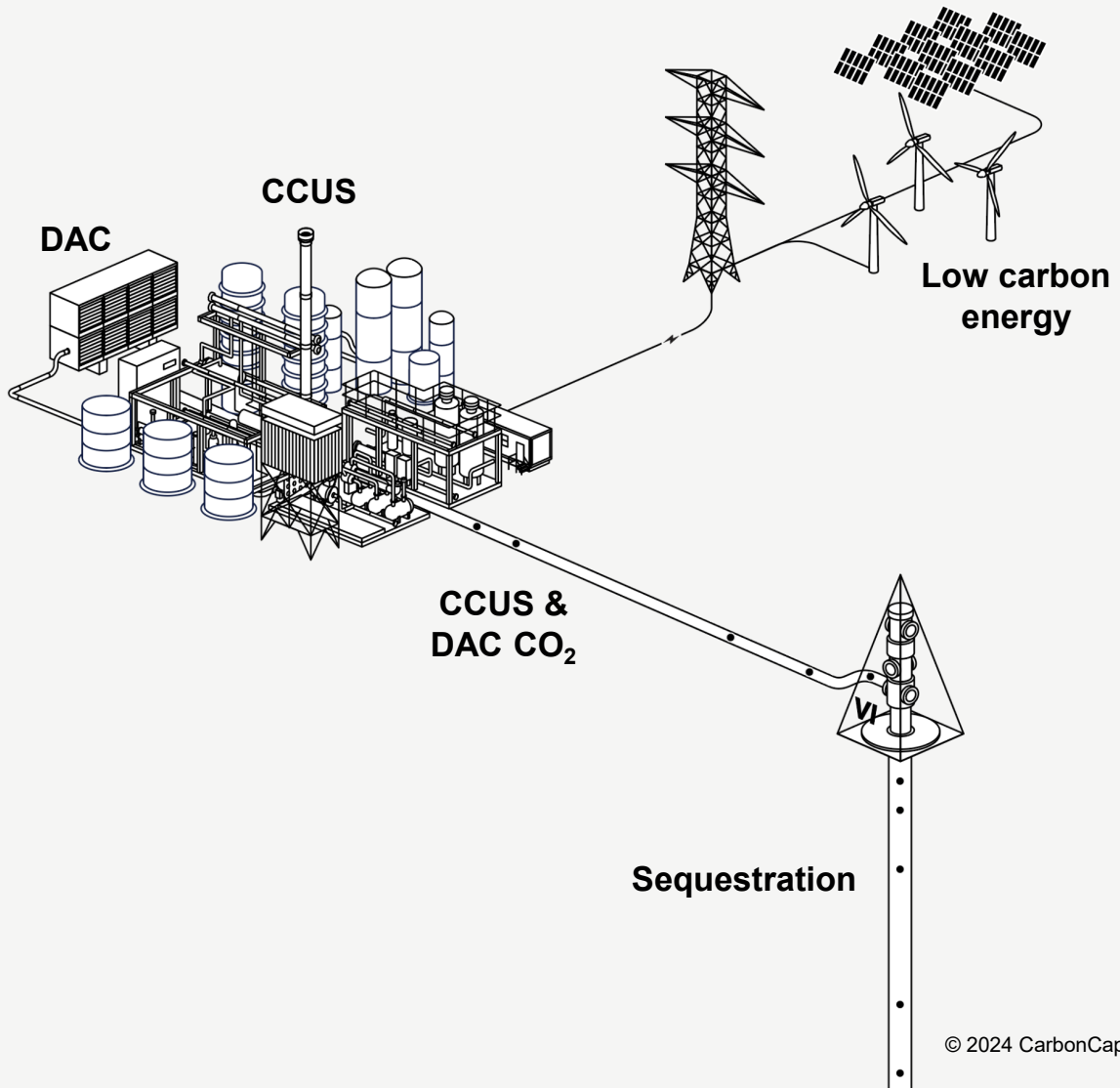
- DAC can use existing CCUS pipelines and storage sites, eliminating the need for CO_2 transport

Advancing technology and deployments

- Continuous R&D in sorbent materials and process efficiency to reduce energy and operational costs – we are looking for Japanese partners!
- Governments can provide funding, tax incentives, and regulatory frameworks to de-risk projects

Utilizing an untapped resource: waste heat

- Waste heat captured from CCUS or other industrial applications can be redirected to power onsite DAC systems, improving energy efficiency



The path forward

DAC will play a pivotal role in helping Japan achieve its 2050 net-zero target while driving economic growth and positioning the country as a leader in carbon capture innovation. Integrating DAC into Japan's existing CCUS ecosystem offers the most efficient and scalable path forward.

Success will depend on the following key factors:

- **Strong collaboration between industry, academia, and the Japanese government** is critical to funding, scaling, and deploying DAC and CCUS projects.
- **A comprehensive policy and regulatory framework**, including incentives such as tax credits and markets (voluntary and compliance), will stimulate investment and accelerate adoption of carbon removal technologies.
- **Expanding solar, wind, geothermal, and natural gas with CCUS energy infrastructure** will ensure DAC systems are powered sustainably, reducing emissions and strengthening energy security.

Thank you.