CALDAC Project Summary

The one-page project summary is one piece of the formal application UC Berkeley submitted to DOE on March 13, 2023.

Berkeley Law

Center for Law, Energy, & the Environment

PROJECT SUMMARY

Applicant: Regents of the University of California, on behalf of the University of California, Berkeley

Principle Investigator: Louise Bedsworth, PhD

Project Title: Feasibility Study to Co-Create a Community Alliance for Direct Air Capture

Project Objectives:
This project will undertake a comprehensive assessment of the technical and social and governance feasibility of establishing a **C**ommunity Alliance for **D**irect **A**ir **C**apture (CALDAC) in the Southern San Joaquin Valley in California. The feasibility assessment will include two intersecting and interconnected elements:

- Technical feasibility of the direct air capture (DAC) hub, including technology partners, location, business model, ownership, and CO_2 storage/utilization option(s), and
- Social and governance feasibility of an innovative, community-led DAC hub design and ownership model that works with local stakeholders as core partners.

Project Description:
This project includes a diverse group of technology companies, research organizations, and community partners. Together, we will collaboratively develop a direct air capture (DAC) hub that achieves technology goals and delivers meaningful community benefit. We will accomplish this by coupling rigorous technical analysis of hub technologies, risk assessment, and life cycle analysis informed by robust community engagement, vision, and metrics. We will assess the feasibility of community- and public-ownership models to deliver meaningful benefits to residents. We will work with our partners to conduct outreach, engagement, and education on DAC; establish a compensated Community Oversight Council; and develop a set of community-vetted criteria and goals for DAC hub design, development, and operation. These activities will inform preliminary hub design, integration, location, and ownership decisions. Completion of a feasibility assessment that meets both technical and social criteria is a requirement to advance to full scale hub design.

Potential Impact:
This innovative, community-based approach will center equity, community benefits, environmental justice, and a just transition for the communities that rely economically on carbon-intensive industries in all phases of the project, providing a new paradigm for community-led and focused climate and energy transitions.

Project Partners:
Lawrence Berkeley National Laboratory (co-lead); Electric Power Research Institute; AECOM; Clean Energy Systems; Fresno State University; Cal State University Bakersfield; PSE Healthy Energy; Project 2030; Data for Progress; Carbon180; Valley Onward

DAC Technologies**:** *Mosaic, Capture6, Origen, AirMyne;* ***CO_2 to-Products Technologies:*** *Blue Planet, CarbonBuilt;* ***Energy Storage Technologies****: Rondo Energy*