CALDAC Summary Slides

The Summary Slides were submitted to DOE on March 13, 2023 and provide a high level overview of the project.

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Regional Direct Air Capture Hub Proposal:
CALDAC - Community ALliance for Direct Air Capture
Topic Area 1 (Phase 0) Proposal: Feasibility Study

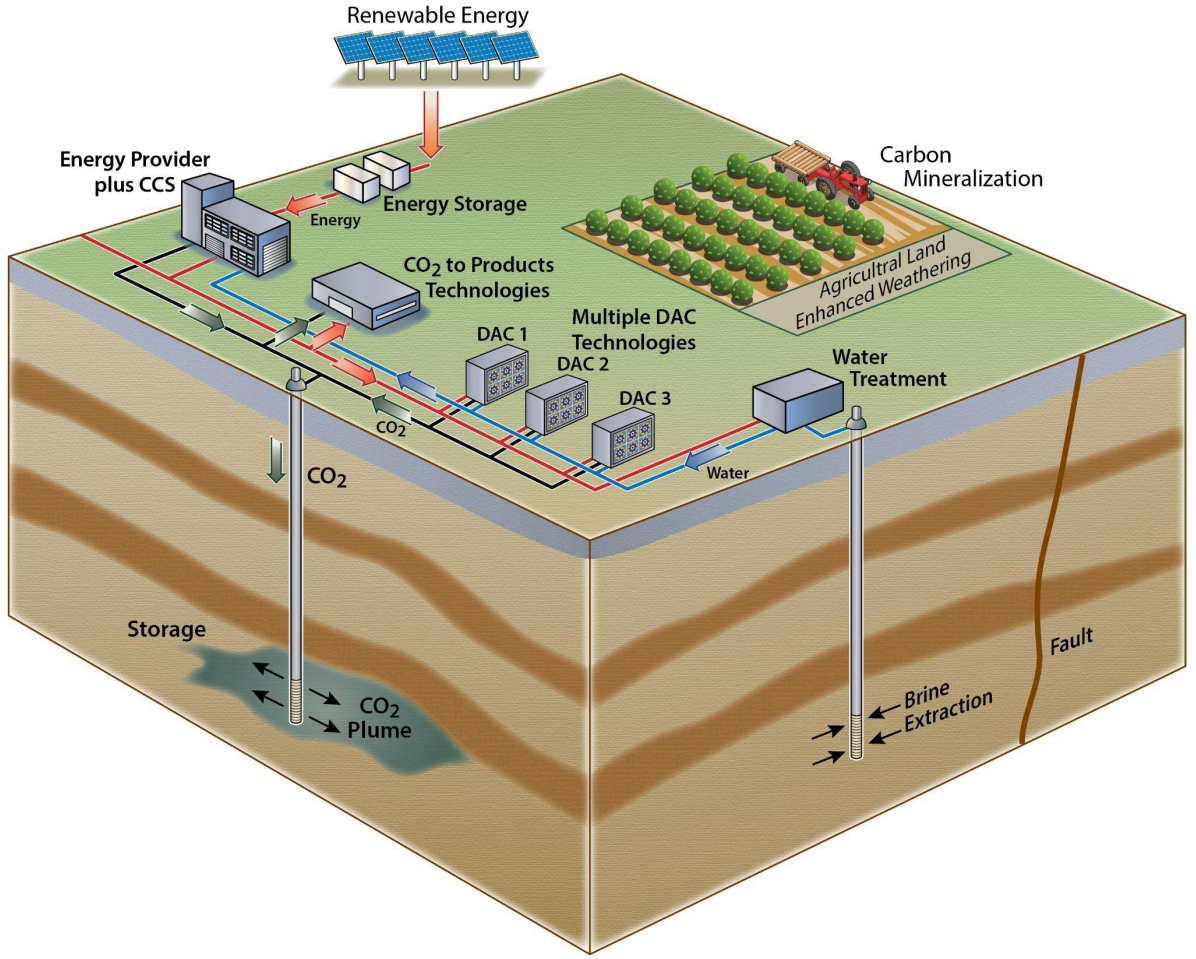
Objectives:

Prepare a comprehensive assessment of the technical and social and governance feasibility of establishing a **C**ommunity **Al**liance for **D**irect **A**ir **C**apture (CALDAC) in the Southern San Joaquin Valley in California. This innovative proposal centers the local community in DAC hub development. The feasibility assessment will include two intersecting and interconnected elements:

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

CALDAC Vision:

A connected hub that integrates multiple DAC technologies, other carbon removal approaches, carbon utilization solutions, carbon-free, clean energy providers and energy storage solutions, water management, as well as geological storage providers.



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Study Area

The Southern San Joaquin Valley experiences the worst air quality in the nation and vulnerabilities in the face of a changing climate. Centering community vision and delivering meaningful benefits to the region is a core principle of the CALDAC Feasibility Study.

Ensuring Equity and Community Benefits

- In Phase 0a, we will expand community partnerships and establish a Community Oversight Council to guide all phases of hub development
- The Council will develop principles and criteria to guide DAC hub development and a community-centered ownership model that is tailored to support underserved communities, minimize environmental impacts, and promote workforce development (a hub by the community for the community)
- The Community Benefits Plan will institutionalize community-defined design and operational criteria to ensure accountability, transparency, and meaningful community benefit.

Key Takeaways

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 Goals and Timeline

The goal of this project is to complete a **comprehensive assessment of the technical, social and governance feasibility** of establishing a **Community Alliance for Direct Air Capture**.

The resulting feasibility study will include:

- A hub design that is technically feasible and meets community-designed criteria for hub design; environmental, economic, and safety performance; and accountability and transparency
- A hub owner, ownership model, and governance structure that delivers real and measurable community benefits
- Co-produced data, accountability metrics, and structures to guide future Phases 1 and 2

Study Period	Activities/Decision Points
Phase 0a: Months 1-9	• Complete preliminary hub design, life cycle assessment, and environmental health and safety analysis • Conduct community outreach, education, and engagement • Establish Community Oversight Council • Identify community vision, goals, and criteria to guide hub design • Develop ownership model and identify owner(s)

Decision Point	• Go/No Go Criteria:
	  • Owner and Ownership Model
	  • Community Oversight Committee and Community Criteria Developed
	  • Preliminary hub design and life cycle analysis complete

Phase 0b: Months 10-24	• Complete final hub design, guided by Community Oversight Council • Complete financial and business plans • Complete Community Benefits Plan

Project Overview

- **Prime Recipient**: Regents of the University of California on behalf of UC Berkeley
- **Principal Investigator**: Louise Bedsworth, PhD (Center for Law, Energy, and the Environment, Berkeley Law)
- **Key Personnel and Project Leadership Team**: Daniel Kammen, Ken Alex (UCB); Jens Birkholzer, Newsha Ajami, Peter Nico, Hanna Breunig, Blake Simmons, Preston Jordan (LBNL); Adam Berger (EPRI); Lee Ann Hill (PSE Healthy Energy); Karl Longley (Fresno State University); Diane Doucette (Project 2030); Vanessa Suarez (Carbon180); Sol Rivas (Valley Onward)
- **Technology Providers:** Mosaic, Capture6, Origen, AirMyne (DAC Technology); Blue Planet, CarbonBuilt (CO_2 to-Products Technology); Rondo Energy (Energy Storage Technology)
- **DOE Funds requested**: $2,999,999; **Cost Share**: $300,000 (from State); $1,172,941 (other sources); **Total Project Cost**: $4,472,940