



Carbon Capture Demonstration Projects Program — Sutter Decarbonization Project

The Carbon Capture Demonstration Projects Program, managed by the U.S. Department of Energy's Office of Clean Energy Demonstrations (OCED), aims to advance integrated carbon capture, transport, and storage technologies and infrastructure that can be deployed at power plants and in hard-to-decarbonize heavy industries. OCED selected three projects to begin award negotiations for a total of up to \$890 million. In August 2024, OCED awarded the Sutter Decarbonization Project \$8.6 million in federal funding (of the total federal cost share of up to \$270 million) to begin activities in Phase 1.



Project at a Glance

- » **Total OCED Cost Share:** Up to \$270 million
- » **Phase 1 Total Project Amount:** \$17.2 million*
- » **Phase 1 OCED Award Amount:** \$8.6 million**
- » **Phase 1 Scope of Work:** Complete the Front-End Engineering and Design (FEED) study and continue workforce planning, project permitting, and other technical assessments
- » **Phase 1 Timeline:** 9-12 months
- » **Recipient:** Sutter CCUS, LLC, an indirect subsidiary of Calpine Corporation
- » **Project Locations:** 10 miles from Yuba City, CA
- » **Start Date:** August 2024

* Represents the total project cost for the initial project phase.

** Represents OCED's cost share for the initial project phase. Additional funding for this project is subject to future award negotiations at the end of each project phase.

About This Project

Calpine plans to build the Sutter Decarbonization Project, a carbon capture demonstration facility that aims to capture carbon dioxide (CO₂) from the Sutter Energy Center (SEC), a natural gas combined-cycle power plant near Yuba City, CA. The project would be the first in the world to deploy an air-cooling system at a carbon capture facility, which would eliminate the use of cooling water and significantly minimize freshwater usage—a critical concern of the local community and an imperative to further deployment of carbon capture and storage (CCS) in the arid western United States.

The project plans to use ION Clean Energy, Inc. (ION) solvent to capture up to 1.75 million metric tons of CO₂ each year—equivalent to the annual emissions of nearly 390,000 gasoline-powered cars—transport it and sequester it permanently and safely underground in saline geologic formations.

During Phase 1 of the project, Sutter CCUS will complete an integrated Front-End Engineering and Design (FEED) study to determine the specifications for CO₂ capture, transport, and storage components. The project will also continue workforce planning, project permitting, and provide input into National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA)-equivalent review processes.

OCED will provide project management oversight of the Sutter Decarbonization Project by evaluating the status and quality of implementation at each phase of the project. Through its phased approach to project management, OCED will review and evaluate the project's progress, including on community benefits, which will impact OCED's decisions to continue to provide federal funding and allow the project to progress to each subsequent phase.

Sutter Decarbonization Project

Project Fact Sheet

Project Sites

Located 10 miles from Yuba City, CA, the Sutter Energy Center is a 550-megawatt facility that consists of two combustion turbine generators, two heat recovery steam generators with duct burners, and a single condensing steam turbine generator. As part of this project, Sutter CCUS would enable the Sacramento Municipal Utility District to cost-effectively meet its 2030 Zero Carbon Plan.

Community Benefits Commitments

Community benefits commitments are a key component of the Sutter Decarbonization Project, informed and developed in consultation with local communities. Community benefits aim to mitigate potential adverse impacts of this project and maximize local positive impact.

The project's community benefit commitments that will begin in Phase 1 include:

- Engaging in robust, ongoing two-way engagement with impacted communities through workshops, community surveys, one-pagers addressing community concerns, one-on-one meetings, and tours at the Calpine Carbon Capture Learning Center, owned by Calpine Corporation, the parent company to Sutter CCUS.
- Assessing potential project benefits and impacts; building a tracking database and geospatial dashboard to regularly share project data and information with the community.
- Entering into a Project Labor Agreement with the State Building and Construction Trades Council of California to engage with local and statewide labor organizations and educational institutions to secure qualified and highly skilled craft labor.
- Supporting 10 internships through Minority-Serving Institutions to create career pathways that can help ensure that the project's high-quality jobs are filled by a skilled workforce from historically underrepresented communities.

More details on the Sutter Decarbonization Project's community benefits commitments can be found in the [Community Benefits Commitments Fact Sheet](#), which will be updated at the start of each project phase.



ION Clean Energy's rendering of a carbon capture demonstration facility

Sutter Decarbonization Project

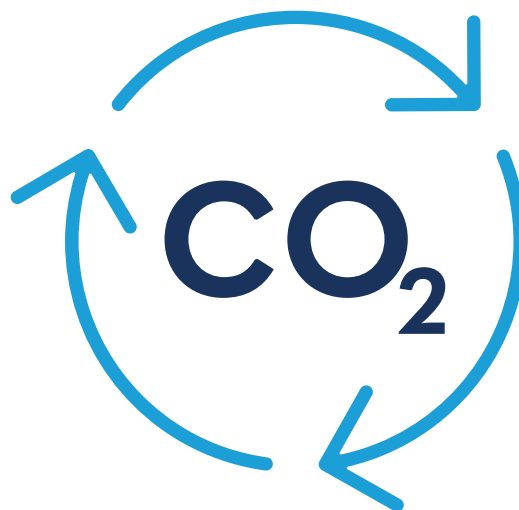
Project Fact Sheet

Carbon Capture Demonstration Projects Program Goals

Large-scale deployment of carbon management technologies is critical to addressing the climate crisis. Reaching our nation's climate goals will require capturing and sequestering 400 to 1,800 million tons of carbon dioxide annually by 2050. Commercial demonstration of advanced carbon capture technologies, integrated with reliable transportation and storage infrastructure, will be required for the widespread deployment of these carbon management technologies. The Carbon Capture Demonstration Projects Program focuses on integrated carbon capture, transport, and storage technologies and infrastructure that can be readily replicated and deployed at power plants and major industrial sources of carbon emissions, such as cement, pulp and paper, iron, and steel.



ION Clean Energy's rendering of a carbon capture demonstration facility



Contact

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More Resources

Carbon Capture Demonstration Projects Program Website: <https://www.energy.gov/oced/CCdemos>

Office of Clean Energy Demonstrations: [energy.gov/oced](https://www.energy.gov/oced)

Carbon Management Interactive Graphic:

<https://www.energy.gov/fecm/interactive-diagram-carbon-management-provisions>

More information about Calpine: calpinecarboncapture.com | calpineca.com

The U.S. Department of Energy established OCED to help scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net-zero emissions by 2050. OCED's mission is to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.