

### THE OFFICE OF CLEAN ENERGY DEMONSTRATIONS

## Regional Direct Air Capture (DAC) Hubs Program – Project Cypress

The Regional Direct Air Capture (DAC) Hubs Program, managed by the U.S. Department of Energy's (DOE) Office of Clean Energy Demonstrations (OCED), aims to kickstart a nationwide network of large-scale carbon removal sites to address legacy carbon dioxide pollution and complement rapid emissions reductions. As part of this program, OCED sought applications for domestic Regional DAC Hubs to demonstrate the processing, transportation, secure geologic storage, and/or conversion of carbon dioxide (CO<sub>2</sub>) captured from the atmosphere with DAC technology. OCED selected two projects to begin award negotiations for a total of up to \$1.2 billion. Following negotiations, in March 2024 OCED awarded the Project Cypress Regional DAC Hub (Project Cypress) with more than \$50 million to begin activities in the initial project phase. Project Cypress is determining final siting and storage options in Louisiana, with selected sites including privately owned land in West Calcasieu Parish.



#### **Project At A Glance – Initial Project Phase**

- » Initial Phase Total Project Amount: \$101,356,680\*
- » Initial Phase OCED Award Amount: \$50,174,880\*\*
- » Initial Phase Scope of Work: Planning, development, and design activities
- » Initial Phase Timeline: 2-3 years
- » Recipient: Battelle, an applied science and technology non-profit organization, is the prime recipient for Project Cypress DAC Hub. Battelle will work in partnership with Climeworks Corporation, and Heirloom Carbon Technologies, Inc.
- » **Project Locations:** Louisiana, including West Calcasieu Parish
- » Project Start Date: March 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**

OCED is working with prime recipient Battelle Memorial Institute to build Project Cypress, a DAC Hub that aims to incorporate multiple DAC facilities in Louisiana, including West Calcasieu Parish, with the ultimate goal of capturing more than 1 million metric tons of existing CO<sub>2</sub> from the atmosphere each year at full capacity and permanently storing it in a geologic formation deep underground. In addition to Battelle, the Project Cypress team consists of technology providers Climeworks Corporation and Heirloom Carbon Technologies. Climeworks employs a solid sorbent capture and thermal regeneration technology, while Heirloom utilizes limestone to absorb CO<sub>2</sub> as it is repeatedly cycled through heating, hydration, and exposure to air. Project Cypress plans to transport the captured CO<sub>2</sub> to a sequestration partner who has obtained a permit for permanent geological storage.

In March 2024, OCED awarded Project Cypress more than \$50 million to begin the initial phase, which is expected to last

2-3 years and include planning, design, and community and labor engagement activities. During this time period, each DAC technology provider will be responsible for the planning and development of their respective facilities, while all entities in the Hub will implement the community benefits commitments jointly. Climeworks' portion of the Project Cypress DAC hub will focus on planning, development, and detailed design for their initial facility while Heirloom's portion of the hub will focus on pre-planning, planning, and development activities for their initial facility.

OCED will provide project management oversight of Project Cypress. Through its phased approach to project management, OCED will evaluate the status and quality of implementation at the "go/no-go" decision points at each phase of the project, during which OCED reviews and evaluates progress, including community benefits, that will impact a project's progression to the following phase.

# **Project Site**

Project Cypress is determining final siting and storage options in Louisiana, with selected sites including privately owned land in West Calcasieu Parish. Project Cypress is negotiating commercial arrangements with service providers, including with Gulf Coast Sequestration, and will use geology that has been studied extensively and deemed viable for safe, permanent carbon storage.

# **Community Benefits Commitments**

Community benefits commitments are a key component of Project Cypress, informed and developed in consultation with local communities, which aim to mitigate potential impacts of this project and maximize local community benefits.

Project Cypress will implement these commitments through:

- Establishing a **Community Engagement Council (CEC)** as a forum for soliciting ongoing community input and feedback at every stage of project development. The CEC will have membership that is representative of impacted communities/community groups.
- Engaging in robust, ongoing **two-way engagement** with impacted communities and workers, with attention to including fence-line, disadvantaged, underrepresented, and typically excluded groups, and focused on the development of negotiated workforce and community agreements.
- Creating a **Site Labor and Workforce Development plan** that ensures project construction and operations jobs are of sufficient quality to attract and retain a skilled workforce to accomplish project objectives during the construction and operations phases.
- Identifying **potential project impacts** and committing that all identified impacts (both benefits and negative impacts) will be: discussed with the CEC; quantified and characterized and addressed with a plan to maximize benefits to disadvantaged communities and avoid, minimize, mitigate, or eliminate negative impacts.
- Initiating critical partnerships to support and train a well-qualified workforce and to advance equity, civil rights, and equal social and economic opportunity, including access to jobs.
- Creating a **publicly available platform** that regularly shares project data and information, is easily accessible to the public, provides updates on project activities, and includes mechanisms to provide feedback.

More details on Project Cypress' community benefits commitments can be found in the Community Benefits Commitments Fact Sheet.



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.

# **Regional DAC Hubs Program Goals**

Nearly all climate models that simulate scenarios to achieve a net-zero carbon economy by 2050 indicate the need for significant investment in direct air capture and other carbon dioxide removal technologies in the near-term. OCED's Regional DAC Hubs Program provides the transformative investments needed to scale up the commercial use of DAC technologies and develop a regional or interregional carbon network to facilitate future carbon storage and/or conversion. The successful demonstration and deployment of these technologies will contribute to our climate goals, helping the United States meet its targets to reach net-zero emissions by 2050.

Investments in DAC technologies are part of a larger DOE Carbon Management portfolio that will contribute to American advancement toward a clean energy and industrial future. To learn more about Carbon Management you can access DOE's <u>Pathways to Commercial Liftoff</u> website or visit the <u>Carbon Management</u> section on the OCED website.



## Contact

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#### **More Resources**

Project Cypress Website: projectcypress.com

DAC Hubs Website: energy.gov/oced/DACHubs

Office of Clean Energy Demonstrations: <u>energy.gov/oced</u>

Carbon Management Interactive Graphic: <u>energy.gov/fecm/interactive-diagram-carbon-</u> <u>management-provisions</u>

