



THE OFFICE OF CLEAN ENERGY DEMONSTRATIONS



Project Cypress Direct Air Capture Hub Community Briefing

11/7/2023

Office of Clean Energy Demonstrations

U.S. Department of Energy

Welcome!



Emmanuel Taylor,
Facilitator

Welcome & Meeting Objectives

- The Office of Clean Energy Demonstrations (OCED) at DOE recently announced the selection of two Regional Direct Air Capture (DAC) Hubs, including one in Calcasieu Parish.
- We at DOE welcome this opportunity to share more information on this project and opportunities for the community to be actively engaged in shaping your community's energy future.
- We will be introducing key personnel involved in the effort and sharing contact information.
- We invite you to engage with our DOE team and the commercial partners involved in this commercial-scale, direct air capture demonstration project.

Guiding Principles & Ground Rules for Discussion

Guiding Principles

Respect	Community of peers
Inclusion	All voices are welcome
Diversity	We all benefit from different perspectives
Timeliness	We only have so much time together
Limitations	We won't solve every problem today
Follow Up	Let's keep the conversation going!

Ground Rules

Be concise in making remarks
Reserve judgement
One person speaks at a time
It is okay to build on the ideas of others
Clarifying questions are okay





Who's In the Room - Show of Hands

Opening Remarks



Kelly Cummins,
Acting Director
OCED



Marcela Mulholland,
Stakeholder Engagement
Lead - DAC Hubs
OCED

Tonight's Agenda

- 5:30 – 6:00 | Community Meet and Greet
- 6:00 – 6:15 | Welcome
- 6:15 – 6:20 | OCED Overview
- 6:20 – 6:30 | Carbon Management and Regional DAC Hubs
- 6:30 – 6:35 | Community Benefits Plan
- 6:35 – 6:50 | Project Cypress DAC Hub Overview
- 6:50 – 6:55 | Next Steps & Opportunities for Engagement
- 6:55 – 7:30 | Q&A Session
- 7:30 | Wrap-Up & Close



OCED Overview



OCED Mission

Deliver clean energy technology **demonstration projects at scale** in partnership with the **private sector** to **accelerate deployment, market adoption**, and the **equitable transition** to a decarbonized energy system.



OCED Mandate



SCALE EQUITABLE, CLEAN ENERGY

Help enable 100% clean electricity by 2035 and net zero emissions by 2050 through an equitable energy transition



UNLOCK NEW INVESTMENT

Unlock and scale trillion-dollar clean energy follow on investment from the private sector and other sources of capital



DE-RISK TECHNOLOGY

Maintain risk-based, balanced, and defensible portfolio of investments



SERVE AS CENTER OF EXCELLENCE

Serve as primary DOE office to deliver full scale clean energy demonstration projects and project management oversight excellence



ENGAGE & COLLABORATE

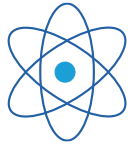
Leverage private sector and broader energy ecosystem to inform OCED and DOE technology commercialization efforts



OCED Scope



Regional Clean Hydrogen Hubs (\$8 billion)



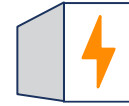
Advanced Reactor Demonstrations (\$2.5 billion)



Carbon Management (\$7 billion)



Industrial Demonstrations (\$6.3 billion)



Long-Duration Energy Storage Demonstrations (\$505 million)



Energy Improvements in Rural or Remote Areas (\$1 billion)



Clean Energy Demonstrations on Mine Land (\$500 million)



Other Initiatives (\$133 million)





Carbon Management and Regional Direct Air Capture (DAC) Hubs



Todd Shrader,
*Director, Project
Management,
OCED*



Carbon Management and Regional Direct Air Capture Hubs

Carbon Management: Development and investment in technologies to reduce past and current carbon dioxide emissions

Regional Direct Air Capture

Hubs: Develop four regional Direct Air Capture Hubs to capture and sequester, utilize, or sequester and utilize at least 1,000,000 metric tons of CO₂ annually from a single unit or multiple interconnected units

Current Status:

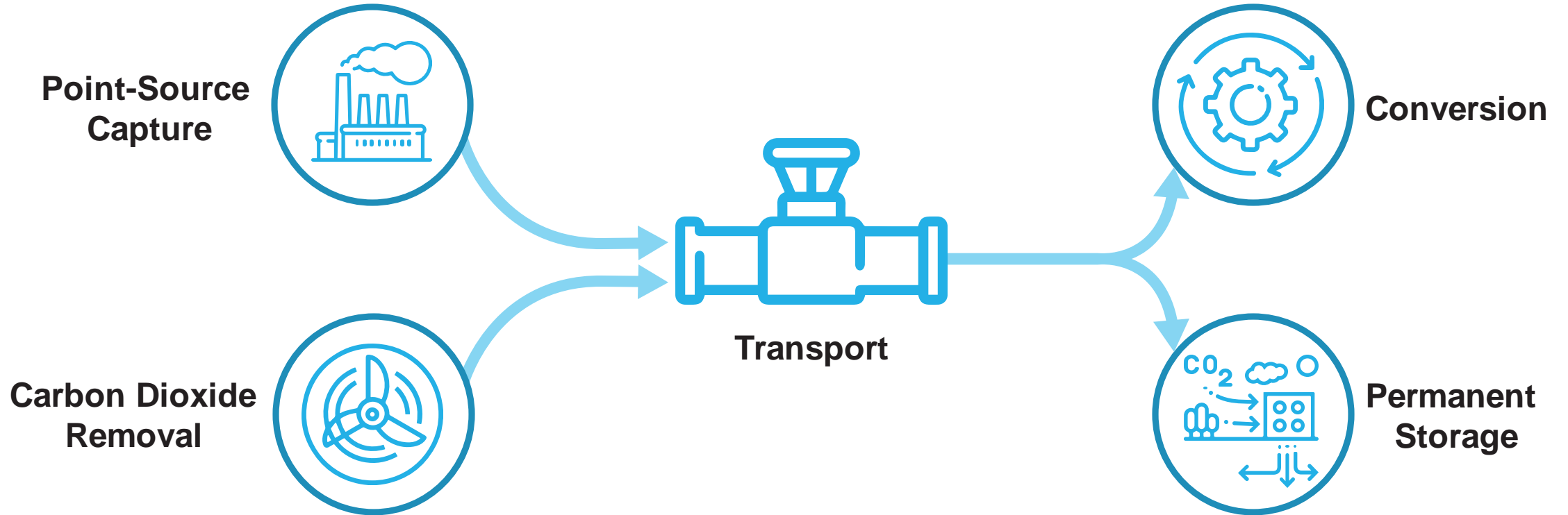
- December 13, 2022: \$1.2B Funding Opportunity Announcement
- **August 11, 2023: DOE announced two projects selected for award negotiations**

Direct Air Capture (DAC) vs. Carbon Capture & Storage (CCS)

- **Direct air capture (DAC):**
 - A carbon dioxide removal process that separates CO₂ directly from the atmosphere.
 - The separated CO₂ can then be converted into components of products like concrete or stored safely and permanently deep underground.
- **Carbon capture and storage (CCS):**
 - Technology used to capture the CO₂ produced by a facility before it enters the atmosphere.
 - This CO₂ can then be used to make other valuable products, or can be stored safely, deep underground.
- **Unlike CCS, DAC is not a form of point-source capture.**
 - **Rather than removing new CO₂ emissions, DAC technology addresses the carbon pollution that already exists in our atmosphere.**



Carbon management is a system of technologies



Recent Regional DAC Hubs Announcements & Phases



Community Benefits Plan



Julia Jeanty,
*Community Engagement
Specialist,
OCED*

Prioritizing Community Benefits in OCED Projects

OCED **requires** applicants to include a Community Benefits Plan (CBP) to help ensure broadly shared prosperity in the clean energy transition.

By **prioritizing community benefits**, we can ensure the next chapter in America's energy story is marked by greater justice, equity, security, and resilience.

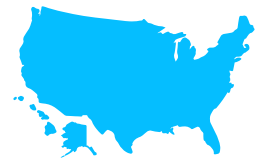
Community & Labor Engagement



Diversity, Equity, Inclusion, & Accessibility



Investing in the American Workforce



Justice40 Initiative

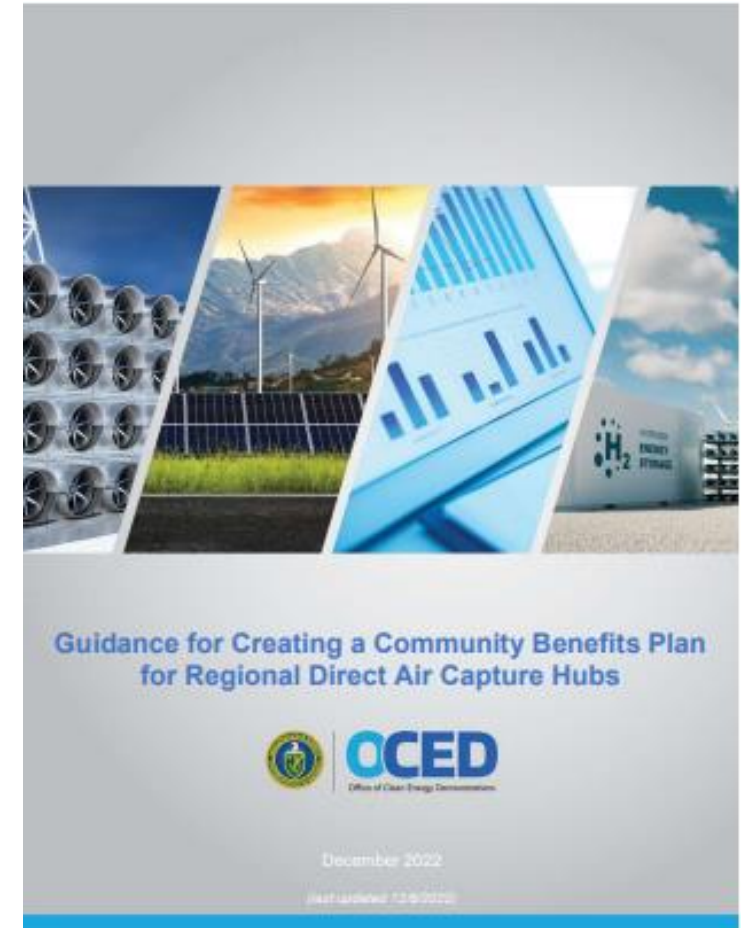


CBP Implementation Requirements at Each Project Phase



Strong CBPs

- Demonstrate moving beyond a vision or assessment into **actionable goals, outcomes, and implementation steps** supported by adequate money, people, and time resources
- Include mechanisms for **accountability to and transparency with** impacted communities
- Propose clear **metrics** to measure success
- Match proposed actions to the **needs and priorities** of impacted communities
- Robustly address **all four topic areas**
- **Minimize and mitigate negative impacts** and harm, especially to already overburdened communities
- **Create good-paying jobs**, equitable access, and invest in workforce development



OCED FOA CBP Guidance docs available with each FOA at:
<https://oced-exchange.energy.gov/>



Project Cypress DAC Hub Project Overview



PROJECT CYPRESS

Combining Direct Air Capture technology, geologic storage, and a talented local workforce to make Southwest Louisiana a leader in an emerging industry.

Project Cypress Overview

- Direct Air Capture (DAC) is a technology that removes excess carbon dioxide (CO₂) from the atmosphere.
- Excess CO₂ is known to create worsening extreme weather events such as hurricanes, droughts, and floods.
- If awarded, Project Cypress will be funded by private investment with support from the Department of Energy (DOE).
- Louisiana and Texas are the big winners. These states were selected for negotiation with DOE through a highly competitive process.



Why Calcasieu Parish?



Conceptual rendering

- Excellent storage geology.
- Gulf Coast Sequestration (GCS) Class VI Injection Permit Application under review.
- Project Cypress will be located close to storage facilities, reducing the length of pipeline.
- Site is approximately 300 acres, located away from population centers.
- Highly skilled and qualified local workforce.



Project Cypress Team

BATTELLE

Project Lead

The world's largest, independent, nonprofit applied science and technology organization.

climeworks

DAC Technology Anchor

A global leader in carbon dioxide removal, operating the world's first commercial DAC facility.

Heirloom

DAC Technology

DAC technology developer accelerating natural processes that enable limestone to absorb CO₂.

Targeted Service Providers



GCS – Carbon Storage provider to Climeworks and Heirloom



Burns and McDonnell – EPC to Climeworks



Entergy – Power utility to Climeworks and Heirloom



Hargrove – EPC to Heirloom

Community Involvement

- This briefing is the first of many such events.
- Community outreach began in 2022.
 - Consist of emails, phone calls, and in person meetings.
- Listening sessions to further engage community organizations.
- Co-design with the community the types of investments and benefits that will be most meaningful in the region.
 - Educational pathways, regional environmental protection, and infrastructure development.
- **projectcypress.com** website is live with email address for feedback.
- Project to incorporate community priorities and concerns, such as a Community Engagement Council.



Community Benefits Plan

- **Community Oversight:** establishing a Community Engagement Council (CEC) to solicit ongoing community input and feedback throughout project.
- **High-quality Jobs:** providing competitive, family-sustaining wages and benefits; 10% of the Project Cypress workforce will draw from former fossil fuel / plastic workers; local workforce development and training.
- **Energy and Water:** Project Cypress will not increase energy prices for consumers or adversely impact local water resources.
- **Transparency:** sharing project information and key updates via our website, including multilingual materials.



Community Engagement Council

- Forming a Community Engagement Council (CEC) to ensure concerns of community are addressed.
- Members of disadvantaged communities and workforce representatives will be among the initial members of the CEC; additional members to be added as project develops.
- In-person and online engagements planned.
- **info@projectcypress.com**



Path Forward

- Project Cypress Team is negotiating final award with DOE.
- Continued engagement with community partners while bringing more groups to the table through one-on-one meetings, listening sessions, and online outreach.
- Establish initial Community Engagement Council membership.
- Engage training centers and develop curriculum enhancements to meet workforce needs.
- Continued digital outreach through website and social media.





PROJECT CYPRESS

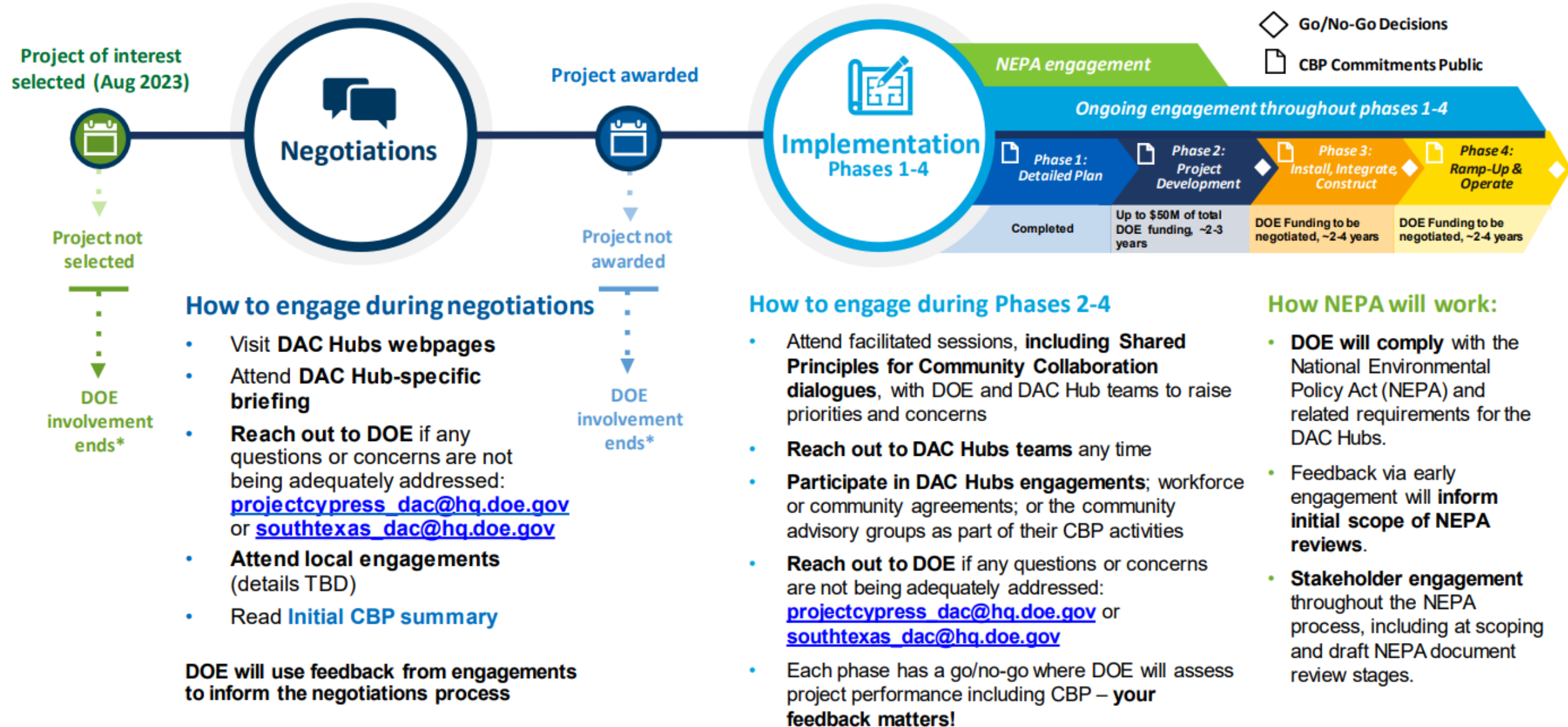
For a Better Net-Zero Tomorrow



Next Steps & Opportunities for Engagement

Get Involved

Project of Interest Selected/Awarded
Project of Interest not Selected/Awarded



**Communities and labor can still engage with the applicant based on the information they released to date to explore a path forward without this specific source of federal funding.*

National Environmental Policy Act

- **What is NEPA?** NEPA is a federal law that requires agencies like DOE to assess the potential environmental impacts of projects
- **Does NEPA Apply?** DOE will complete a NEPA review for the activities and may determine that the activities fall under one of the following categories:

Categorical Exclusion (CX)

- Categories of actions that DOE has determined, by regulation, do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an EA nor an EIS normally is required
- Categorical exclusions do not involve public review/comment, but are posted for public review once they are complete

Environmental Assessment (EA)

- A brief analysis to determine whether an EIS is required
- **Two public review/comment periods:**
 - Comment period and public scoping meeting after the notification of DOE's decision to prepare an EA
 - Comment period and public meeting after the EA is drafted

Environmental Impact Statement (EIS)

- A detailed statement for major federal actions significantly affecting the human environment
- **Two public review/comment periods:**
 - Comment period and public scoping meeting after the notification of the DOE's decision to prepare an EIS
 - Comment period and public hearing after the EIS has been drafted

NEPA Resources: [OCED's NEPA Guide](#)



Q&A Session



Questions for Discussion

Are there any items that you heard here today that you would like to take a few minutes to further discuss?



Questions for Discussion

Are there topics that you haven't heard here today that you believe are important regarding the proposed project?



Questions for Discussion

Are there specific concerns that you have concerning this project that DOE should prioritize considering in the near-term, before a contract is awarded for this project?



Questions for Discussion

Are there specific concerns that you believe should be addressed within the project's Community Benefits Plan (CBP)?



Staying Connected with OCED + Project Cypress DAC Hub

- To reach **DOE OCED** about this DAC Hub project:
 - Email: ProjectCypress_DAC@hq.doe.gov
- To reach the **Project Cypress** team about this DAC Hub project:
 - Email: info@projectcypress.com
- Subscribe to receive OCED news and updates
 - Visit energy.gov/oced/ and scroll to the bottom to sign up.

Sign Up for OCED News & Alerts

Subscribe and stay up-to-date on all upcoming funding opportunities, news announcements, upcoming events, and more.



Next Wednesday: Lake Charles Community Benefits Planning Forum

Join the Office of Energy Justice and Equity and OCED for a follow-up forum on Community Benefits Planning next week for Lake Charles and Sulfur:

Nov 15th 6:00-7:30 PM

Register:

<https://www.eventbrite.com/e/lake-charles-louisiana-community-benefits-forum-tickets-742507910147>

Location: Allen P. August Multipurpose Center
2001 Moeling Street Lake Charles, LA 70601



U.S. DEPARTMENT OF
ENERGY

Office of Economic
Impact and Diversity

Staying Connected with OCED DAC Hubs Program

- OCED DAC Hubs Program Page
energy.gov/DACHubs
- OCED DAC Hubs Factsheet
energy.gov/media/298147
- Justice40 Initiative
energy.gov/diversity/justice40-initiative



For more information, please contact: ProjectCypress_DAC@hq.doe.gov



Thank you!



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For more information, please visit energy.gov/OCED