



# THE OFFICE OF CLEAN ENERGY DEMONSTRATIONS



## Carbon Capture Demonstrations Baytown CCS Project Community Briefing

January 10, 2024

Office of Clean Energy Demonstrations

U.S. Department of Energy

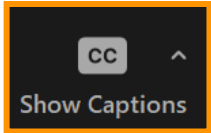
# Welcome & Meeting Objectives

- The Office of Clean Energy Demonstrations (OCED) at DOE recently announced the selection of three Carbon Capture Demonstration Projects, including one in Baytown, Texas.
- We at DOE want to share more information on this project and the opportunities to plug in and help shape your community's energy future.
- Engage with DOE and the partners involved in this project.



# Briefing Logistics

## How do I turn on live captions?

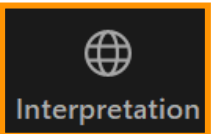


Click on the “**Show Captions**” button in the control panel at the bottom of your screen.

## Is this briefing being recorded?

**No, this briefing is not being recorded** in order to encourage open dialogue and participation from all attendees.

## How do I turn on Spanish or ASL interpretation?



Click on the “**Interpretation**” button in the control panel at the bottom of your screen.

## Will the slides be shared?

**Yes, a copy of the presentation slides will be shared** via email with registrants and on the OCED website within the next few days.



# Agenda

- Welcome & Objectives
- OCED Overview
- Carbon Capture Demonstration Projects Program Overview
- Baytown CCS Project Overview
- Next Steps & Resources
- Feedback Session
- Wrap-up & Close



# OCED Overview



**Lydia Kubiak-Cardona,**  
Community Engagement  
Specialist, OCED

# 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.



# Prioritizing Community Benefits in OCED Projects

OCED **requires** applicants to include a Community Benefits Plan 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



**OCED**  
Office of Clean Energy Demonstrations

# Carbon Capture Demonstration Projects



**Todd Shrader,**  
Deputy Director, Project  
Management, OCED



# How Does Carbon Capture and Storage (CCS) Work?

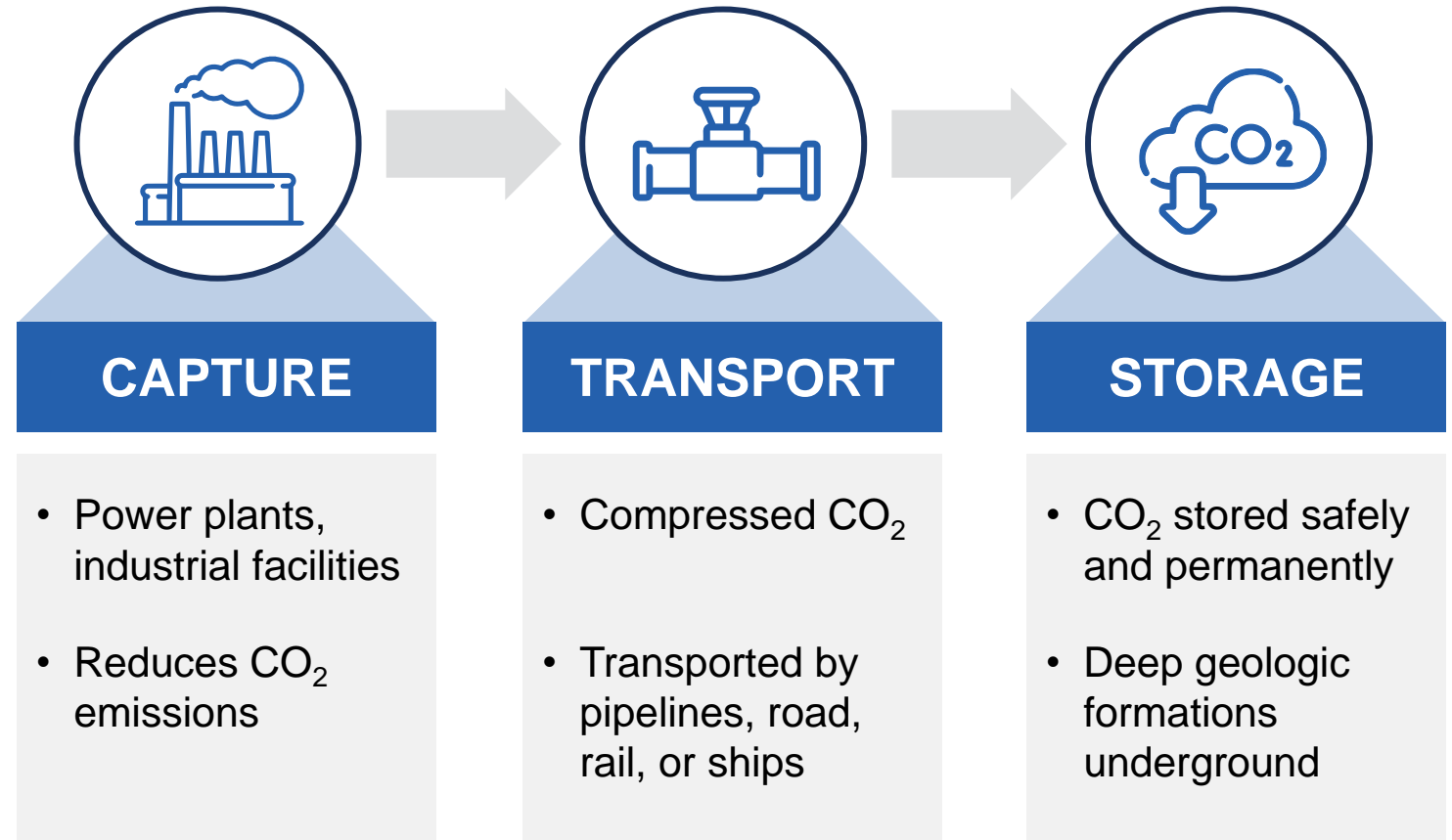
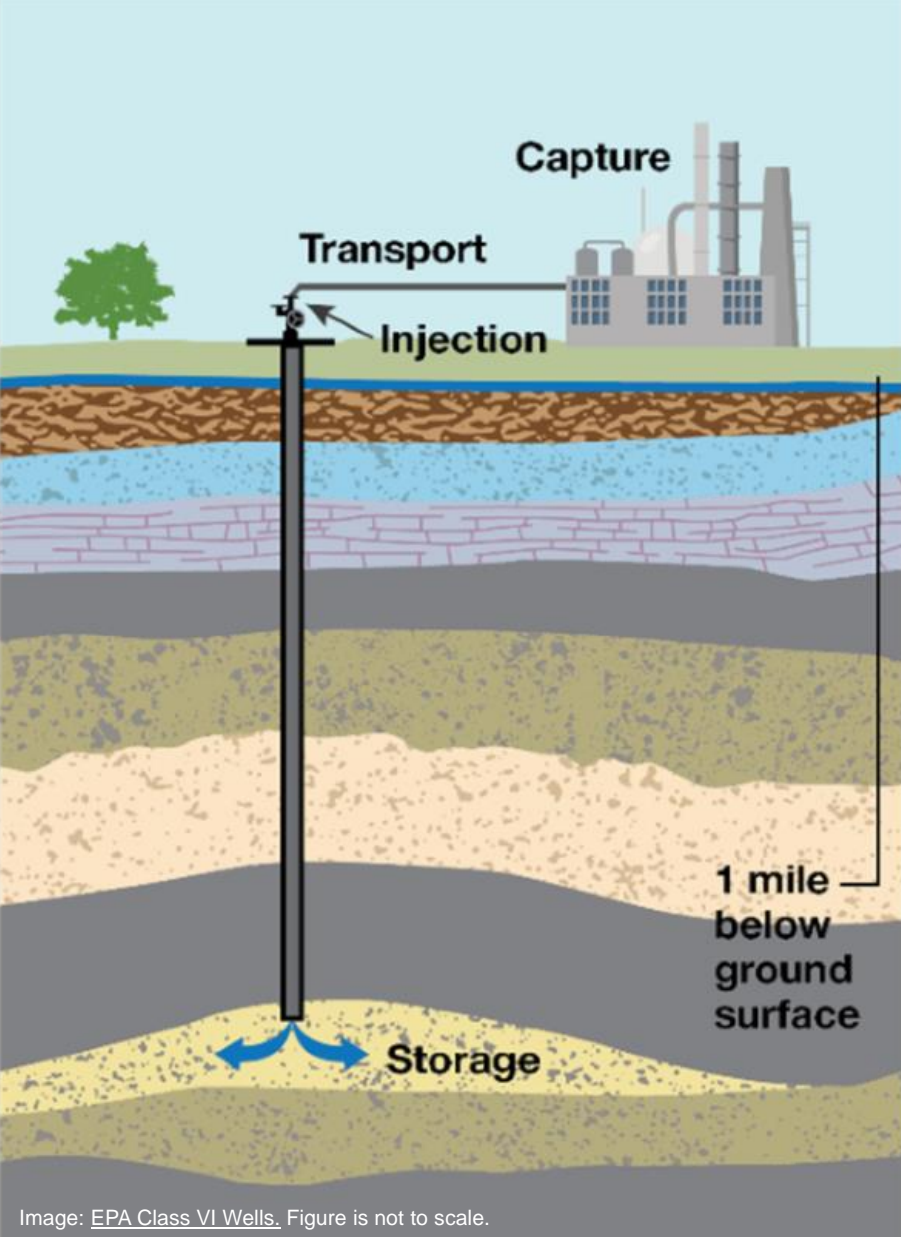
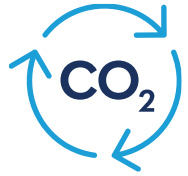


Image: [EPA Class VI Wells](#). Figure is not to scale.

# Deploying CCS Technology has the Potential to...



**Reduce harmful carbon pollution** by preventing carbon emissions from entering the atmosphere.



**Demonstrate technology leadership** and increase U.S. competitiveness in the global energy transition.



**Deliver cleaner air** by reducing health-harming pollutants, like SO<sub>2</sub>, NOx, and particulate matter.



**Maintain good, high-wage jobs** while advancing the clean energy economy.



**Decarbonize existing infrastructure** and assets in the power and industrial sectors.



**Support our nation's net-zero goals** and help the world decarbonize at existing facilities.





## Carbon Capture Demonstration Projects Program

**Develop six carbon capture facilities to significantly improve costs, emissions reductions, and environmental effects of coal and natural gas use.**

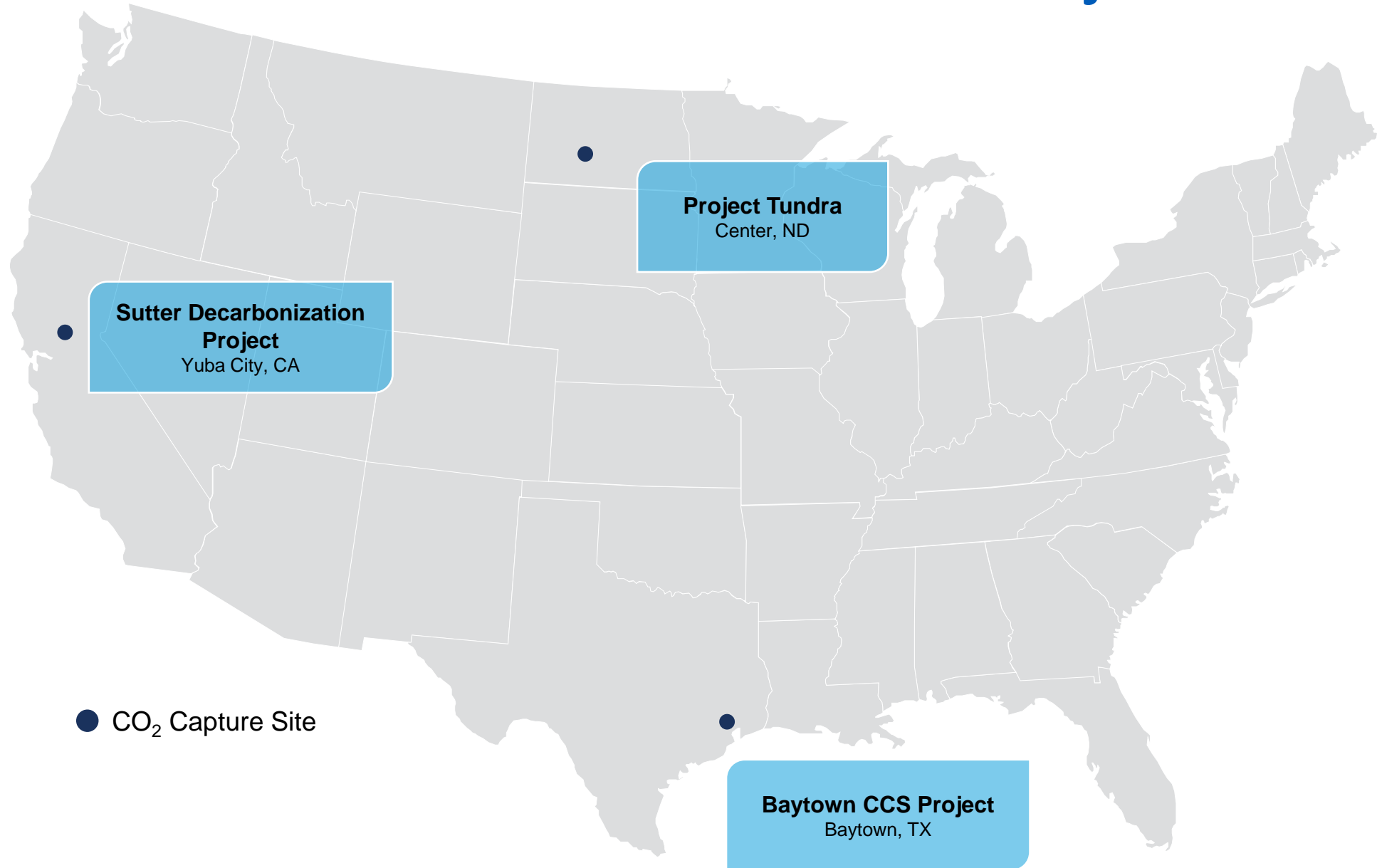
### **CCS Demonstrations Current Status**

- February 2023: Announced funding opportunity for CCS Demonstration Projects.
- May 2023: Received full applications.
- **December 14, 2023: OCED announced three projects selected for award negotiation.**
- DOE anticipates future FOAs for CCS Demonstrations.

### **Carbon Capture FEED Studies Current Status**

- May 2023: Selected nine FEED study projects for award negotiation.
- September 2023: Awarded two FEED study projects.
- December 2023: Awarded four FEED study projects.
- *Other FEED study selectees are still in negotiations.*

# Selected CCS Demonstration Projects





# Baytown CCS Project Overview





America's Premier Competitive Power Company  
... Creating Power for a Sustainable Future

## Calpine Baytown Carbon Capture & Storage (CCS) Project

### COMMUNITY BRIEFING

January 10, 2024

# TODAY'S DISCUSSION

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## Baytown Carbon Capture & Storage Project

- Overview and Timeline
- Rendering
- Community Benefits Plan



# OVERVIEW

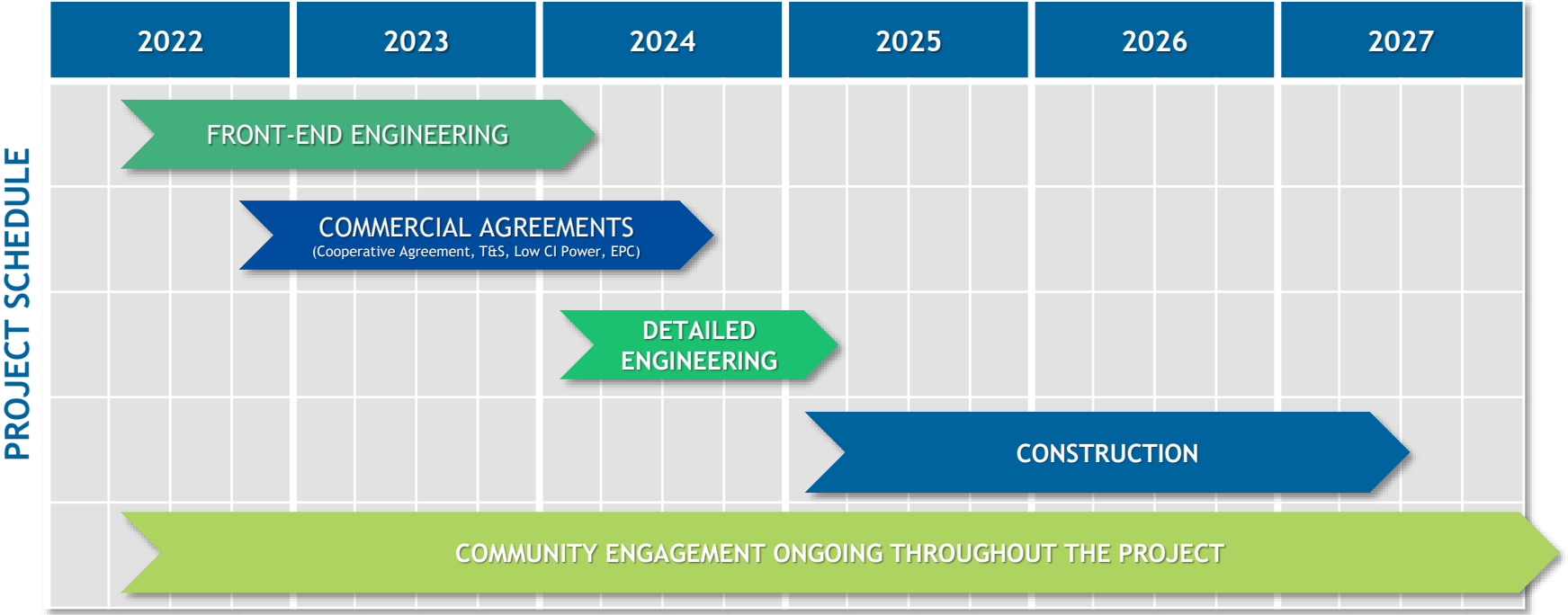
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Baytown CCS is a compelling project that can reach FID in 2024, resulting in broader potential benefits.

- **Cogeneration Facility:** Supports both power and industrial decarbonization, capturing ~2 MTPA (@ 95% CO<sub>2</sub> capture efficiency).
- **Capture Technology - Shell's Cansolv Technology:** Low VOC emissions, proven, and ready to scale and apply to gas generation.
- **CO<sub>2</sub> Transportation + Sequestration:** The robust plan will have Houston-area catalytic effects.
- **Construction-Friendly Site:** Plenty of room and accessibility.
- **Permitting and Approvals:** Well underway, air permit issued, overall project relatively environmentally unencumbered.
- **Graywater:** We are evaluating the feasibility and its use to minimize freshwater consumption.
- **Community Reception:** Continues to be positive. Our objective is to raise the bar for CCS.

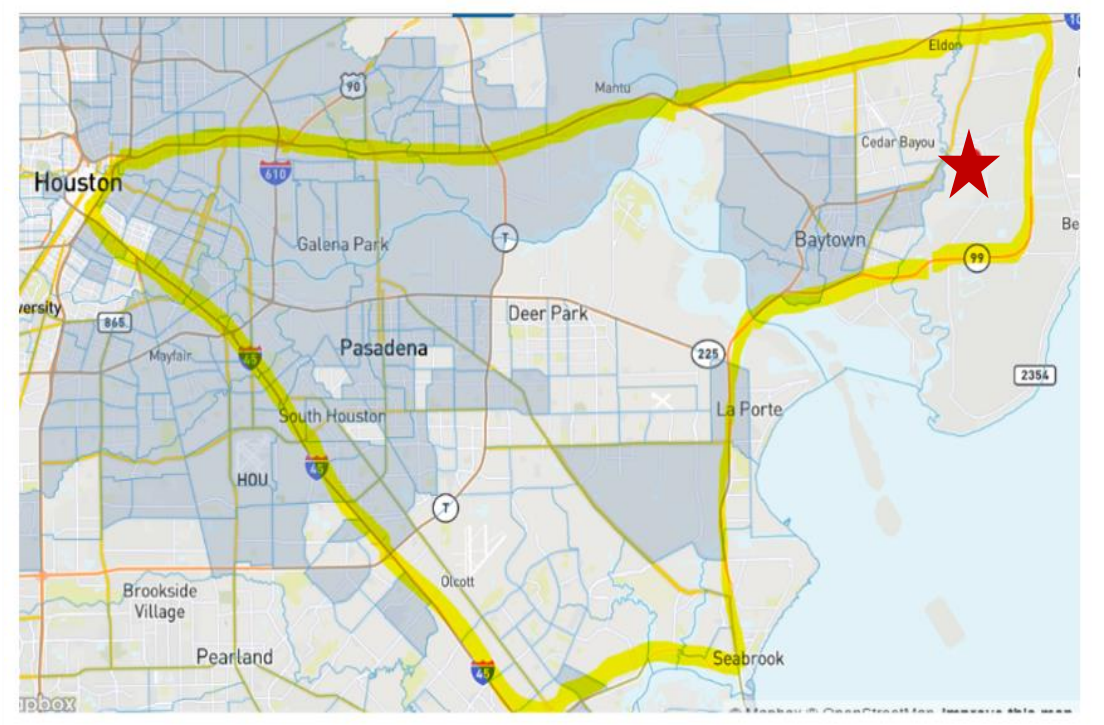


# BAYTOWN CCS PROJECT SCHEDULE



# COMMUNITY BENEFITS PLAN

- *Calpine CBP focus area bordered in yellow.*
- *Shaded census tracts indicate Justice40 disadvantaged communities. When selected, transportation and storage provider will be required to create a CBP encompassing other areas.*
- *Project is located outside of DACs with benefits targeted towards local overburdened and underserved communities.*



# COMMUNITY BENEFITS PLAN

## APPROACH

- Community-first.
- Data-driven, SMART goals driven by tangible datapoints.
- Built on foundation of engagement and charitable giving in the region.

## ENGAGEMENT

- Generally supportive community & good operating history
- Over 500 meetings held with community organizations to-date.
- General sentiment: familiarity with industry, desire for greater transparency.
- Graywater prospect will benefit community.

## COMMITMENTS

- **DEIA**
  - Diverse supplier spend target.
  - Outreach to 10 new diverse institutions and/or organizations.
- **Justice40**
  - Economic impact analysis.
  - Verification and validation by third party.
- **Workforce**
  - Internship program expansion.
  - Exceeding prevailing wages.
  - Community college pathways to careers with Lee College and San Jacinto College.
- **Community**
  - Data-sharing protocol with University of Houston. Third parties engaged to support accurate Justice40 benefits measurement.
  - Continual, iterative engagement.
  - K-12 programming.
  - Intentional approach to Community Agreements.



# Next Steps & Resources



**John Brown,**  
Stakeholder Engagement  
Lead, Carbon Capture,  
OCED

## Next Steps – Negotiations

**Award Negotiations:** DOE OCED will begin the negotiations process with project selectees

**After Award: *IF the projects receive an award (successful negotiations)***

- Awarded projects will enter into a cooperative agreement with OCED
- Phase 1: Detailed Project Planning begins
- OCED will work with the awarded project partners starting in Phase 1 to ensure compliance with the National Environmental Policy Act (NEPA)
- Local communities (state, local and community stakeholders) will have the opportunity for ongoing engagement with OCED and the awardee(s)

More broadly, DOE is exploring the use of regional frameworks to support project outcomes.



# Get Involved

How could this project impact me?

Learn more about OCED's  
Community Benefits Plan →

Is there a Carbon Capture Demonstration  
project near me?

Learn more about the  
selected projects here →

Project  
selected



**Announcement and Negotiations**  
Projects have been selected, but awards  
have not been made



What is a CC  
Demo project?

Learn more →

Project  
awarded



When are the CC Demos  
project-specific briefings?

Learn more and  
register here →

1

~12-18 months

2

~2-3 years

3

~3-6 years

4

~2-4 years

Phase 2: Project Development

Community Benefit Commitments Public

Phase 1: Detailed Plan

Community Benefit Commitments Public

Phase 3: Install, Integrate, Construct

Community Benefit Commitments Public

Phase 4: Ramp-Up & Operate

Community Benefit Commitments Public

Ongoing community engagement  
throughout each phase

How do I stay informed?

Sign up for updates →



**OCED**  
Office of Clean Energy Demonstrations



Community Benefit Commitments Public



Go/No-Go Decisions

# CCS Demonstration Projects Resources

## Carbon Capture Demonstration Projects Program

- [Program Page](#)
- [Press Release](#)
- [Overview of Selected Projects](#)
- [Local Engagement Opportunities](#)
- [National Briefing Recording](#)

## Additional Carbon Capture Resources

- [Carbon Management Pathways to Commercial Liftoff Report](#)
- [Interactive Diagram of DOE's Carbon Management Provisions](#)
- [EPA Class VI Wells Information](#)

## Community Benefits

- [CBP101 Webinar](#)
- [OCED CBP Factsheet](#)
- [OCED Communities, Jobs, and Justice Page](#)





# Feedback Session



**Emmanuel Taylor,**  
Facilitator

# Ground Rules for Discussion

- Submit questions using the Q&A feature.
  - You can also see and upvote other questions that have been asked.
- Reserve judgement
- One idea at a time
- It is okay to build on the ideas of others
- Clarifying questions are okay





## Stay Connected

- Reach DOE OCED about this project at [Baytown\\_CCS@hq.doe.gov](mailto:Baytown_CCS@hq.doe.gov)
- OCED Website & Newsletter [energy.gov/oced](https://energy.gov/oced)

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# Thank you!



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