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# Direct Air Capture

## Addressing the Needs of the User Community

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# Why We're Here

Because we want to hear your voice.

## Highlights

- In 2022, Congress authorized \$25 million for a National DAC Test Center
- Center designed to fill user needs of test capture material capabilities, integrated capture and regeneration processes, and testing environments to advance developer skids
- Designed to create an integrated experimental facility and modeling capability to rapidly advance DAC technologies from Technology Readiness Level (TRL) 2 to 6

## Where We Are

- NETL is currently completing a siting study and conceptual design, to be followed by a preliminary design effort



# Why NETL?

**NETL** is the nation's only  
national laboratory  
devoted to **enabling &  
accelerating carbon  
management  
technology discovery,  
development &  
deployment.**



# Why NETL: Rapid Prototyping

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Supports Flexibility and Agility in Facility Design

- The DAC facility as currently designed addresses the need for a capability to mature emerging technology - based DAC processes ( $\geq$ TRL3)
- Refinements to Center design, inspired by principles of rapid prototyping, will increase flexibility and agility of facility operation for broader range of developing technologies:
  - Capability to rapidly fabricate key components (e.g., 3-D printing and other on-demand manufacturing)
  - Capability to accommodate multiple process types and partial process technologies
  - Common, shared, and flexible support systems
  - Capability to apply process intensification technologies (e.g., Microwaves)



U.S. DEPARTMENT OF  
**ENERGY**



# Why NETL: Partnerships

Mechanisms NETL uses to enable collaboration include:

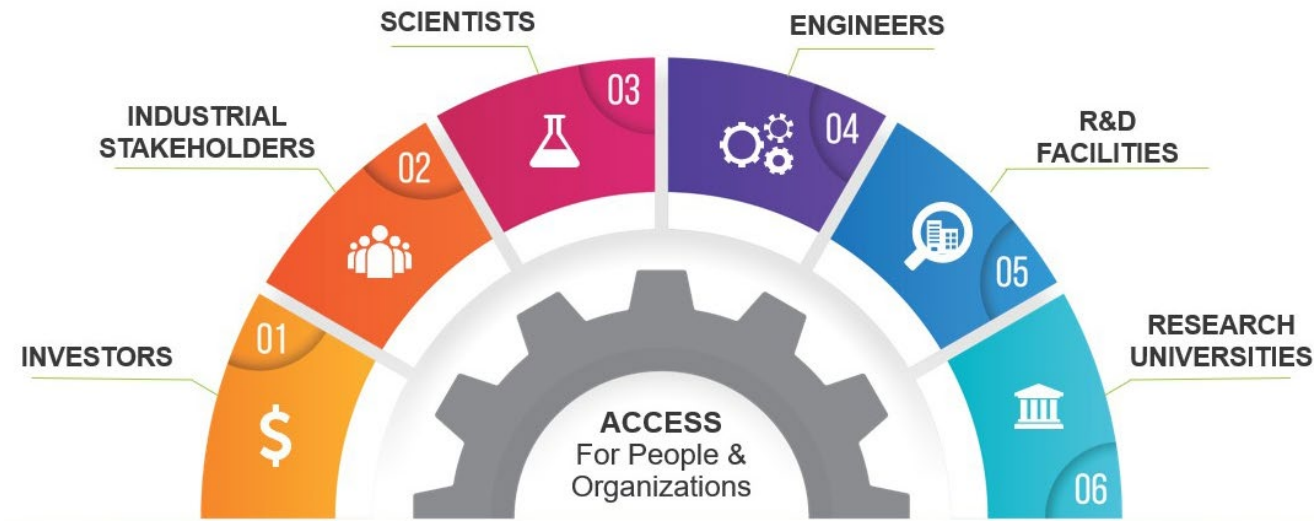
- Non-Disclosure Agreements (NDA)
- Cooperative Research and Development Agreements (CRADA)
- Contributed Funds Agreements (CFA)
- Funding Opportunity Announcement (FOA) Response



# We're here for our users.

## How NETL supports the path to commercialization:

- Focusing on research that **enables technology breakthroughs**
- Convening broad stakeholder groups to **create public-private partnerships**
- Providing techno-economic analysis to **inform technology pathway & policy decisions**
- Pursuing investments that **enhance U.S. technology leadership & global competitiveness**
- Access to world **class facilities, research and scientists**



# Workshop Outcomes: Business Plan

## Goals of the DAC Facility Business Plan:

- Take the feedback gained at this meeting and deliver a facility designed around the operating needs and wants of future users
- Gather key data points to incorporate into planning and execution:
  - technical issues (e.g., range of test environments, support for process prototyping, computational modeling of component/system performance, availability of life cycle analysis)
  - contractual issues (e.g., availability of streamlined user agreements)
  - generation and control of intellectual property
- To define how best to design and operate the Center to maximize value to the users and taxpayers
- Continue to engage future users and stakeholders throughout the process and facilitate a quick transition into full facility usage

# Let's connect.

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