

A photograph of an industrial facility, likely a refinery or chemical plant, featuring large, shiny metal pipes and complex machinery. The scene is dimly lit with some bright spots from industrial lighting.

Industrial Demonstrations

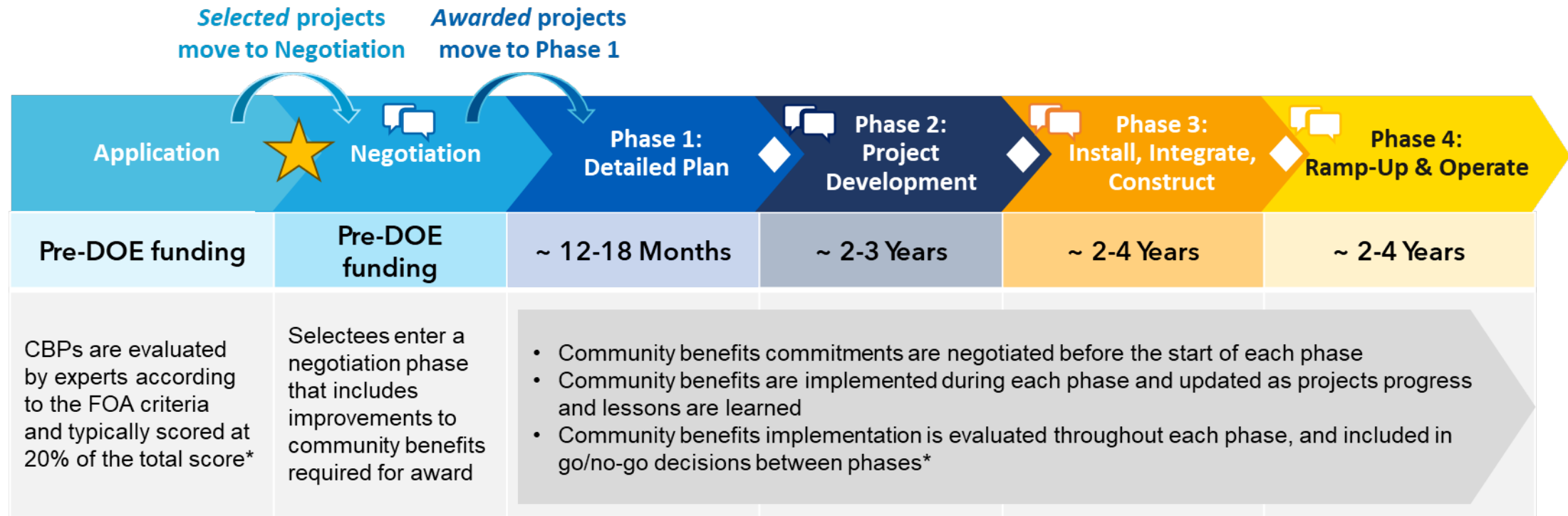
Demonstrate transformational technologies to decarbonize energy-intensive industries

- Drive a U.S. competitive edge in low- and net-zero carbon manufacturing
- Help build a market for green products through high-impact, replicable solutions

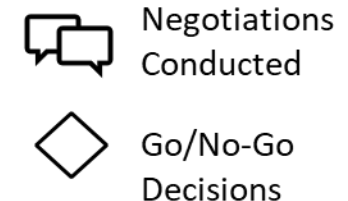
Current Status – October 2024

- Oct 2024: 10 of 32 projects have been awarded to move into Phase 1.
- Aug 2024: Awards are being made on an ongoing basis, starting in August 2024
- Mar 2024: Selected 33 projects across more than 20 states for award negotiations
- Mar 2023: Issued \$6B funding announcement

Community Benefit Commitments - Implementation Requirements per Phase



**CBPs are considered alongside assessments of engineering, procurement, and construction; business development and management; permitting and safety; and technical data and analysis.*



Awarded Projects

Awardee	Location	Award Amount \$
BASF	Freeport, TX	Up to \$75 million
Cleveland-Cliffs Pennsylvania	Butler, PA	Up to \$75 million
Cleveland-Cliffs Ohio	Middletown, OH	Up to \$500 million
Constellium	Ravenswood, WV	Up to \$75 million
Eastman Chemical Company	Longview, TX	Up to \$375 million
Heidelberg Materials	Mitchell, IN	Up to \$500 million
Kohler	Casa Grande, AZ	Up to \$51.2 million
Libbey Glass	Toledo, OH	Up to \$45.1 million
Roanoke Cement	Troutville, VA	Up to \$61.7 million
United States Pipe and Foundry Co.	Bessemer, AL	Up to \$75.5 million



During Phase 1, OCED Recipients are adding detail to their Community Benefit Commitments

Awardee	CB at Selection	CB at Phase 1
BASF	Support ~1600 employees	Creating additional jobs, engage existing Community Advisory Panel
Cleveland-Cliffs Pennsylvania	Support 1000+ existing jobs, represented by UAW	Support 1000+ existing jobs, represented by UAW, on-the-job training, improved local air quality, public open house
Cleveland-Cliffs Ohio	~170 permanent jobs, 1200 construction jobs, represented by IAM	~170 permanent and ~1200 construction jobs, represented by IAM, on-the-job training, reducing criteria and hazardous air pollutants, public open house
Constellium	Hourly workforce represented by USW	Continue collective bargaining agreement with USW, improve local air quality
Eastman Chemical Company	~200 permanent jobs, 1000 construction jobs, community center renovation	~200 permanent jobs, ~1000 construction jobs, supporting renovation of a community building to serve as a hub for community outreach, workforce training, and more
Heidelberg Materials	~20-25 permanent jobs, ~1000 construction jobs	~20-25 permanent jobs, ~1000 construction jobs, contracting with small and underrepresented businesses, engage with labor unions including USW
Kohler Co	Reduce grid demand, upskilling	Workforce agreements with subcontracted workforce, enhanced grid stability for local residents
Libbey Glass	~268 construction jobs, expanded apprenticeship program	~268 construction jobs, reduce criteria air pollutants, work with local unions and work with local education institutions to expand apprenticeship program for skilled trades
Roanoke Cement	~25 permanent jobs, ~115 construction jobs, workforce development program	~25 permanent jobs, ~115 construction jobs, develop registered apprenticeship program, plan a training and education consortium
United States Pipe and Foundry	~220 construction jobs, collective bargaining agreements with USW, IAM, IBEW	~220 construction jobs, continue collective bargaining agreements with USW, IAM, and IBEW, internships program shadowing U.S. Pipe engineers



Not Yet Awarded Projects

Project	Location	Award Amount \$
AMERICAN Cast Iron Pipe Company	Birmingham, AL	Up to \$75 million
Brimstone	TBD	Up to \$189 million
Century Aluminum	KY or OH/MS River Basins	Up to \$500 million
Diageo Americas	Shelbyville, KY and Plainfield, IL	Up to \$75 million
Dow Chemical Company	U.S. Gulf Coast	Up to \$95 million
ExxonMobil	Baytown, TX	Up to \$331.9 million
Gallo Glass	Modesto, CA	Up to \$75 million
Golden Aluminum	Fort Lupton, CO	Up to \$22.3 million
International Paper	Mansfield, LA	Up to \$46.6 million
Kraft Heinz	10 sites across IL, MS, OH, MI, IN, NY, MN, IA, and VA	Up to \$170.9 million
National Cement Company of CA	Lebec, CA	Up to \$500 million
O-I Glass	CA, OH, VA	Up to \$125 million
Orsted	Texas Gulf Coast	Up to \$100 million
Real Alloy Recycling	Wabash, IN	Up to \$67.3 million
Skyven Technologies	TBD	Up to \$145 million
SSAB	IA and MS	Up to \$500 million
Sublime Systems	Holyoke, MA	Up to \$86.9 million
Summit Materials	GA, MD, TX, TX	Up to \$215.6 million
T.EN & Lanzatech	U.S. Gulf Coast	Up to \$200 million
Unilever	MS, TN, VT, VT	Up to \$20.9 million
Vale USA	U.S. Gulf Coast	Up to \$282.9 million
Wieland North American Recycling	Shelbyville, KY	Up to \$270 million



Delivering Clean H₂ Demonstration Projects at Scale

Largest cooperative agreements in DOE history
\$7B Federal, >\$40B Industry

7 hubs, >100 individual projects, >2.5 MMTPA H₂
>20 MMTPA GHG reduction

Gated project development processes

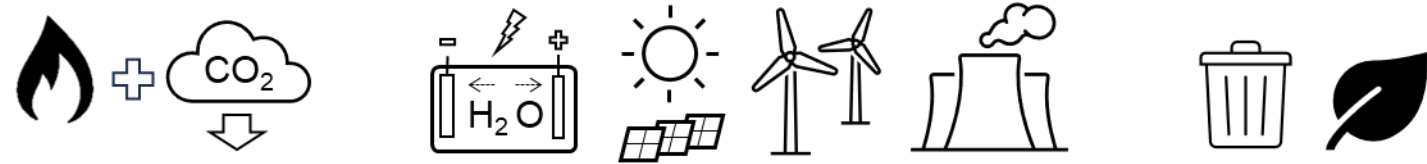
3 hubs under award – ARCHES, PNW, ARCH2

Additional demand side support program



Clean H2 Hubs – Full Ecosystem Focus

Production



Distribution



End Use



Community



Clean H2 Hubs – Key Points

- Cooperative Agreement Terms
- Beginning stages – Pre-FEED portfolio
- 45V Tax Credits
- NEPA
- Communication & Engagement



Nascent clean energy markets face supply-demand stalemate

High costs and uncertain supply **scare away buyers**, impeding market development

Producers struggle to obtain financing without a reliable demand outlook



Without deployment, **costs remain high, supply remains uncertain, and markets don't mature**