



REGIONAL CARBON CAPTURE DEPLOYMENT INITIATIVE

UPDATE —

February 10, 2023

Save the date: Upcoming GPI Direct Air Capture Atlas Webinar

Join the Great Plains Institute on March 2 at 12 PM ET for a virtual event to mark the launch of our upcoming report: An Atlas of Direct Air Capture: Opportunities for Negative Emissions in the United States.

Direct air capture is a promising CO₂ removal technology that can be deployed at significant scales. The United States (US) has recognized that DAC will be essential to reducing the nation's emissions and meeting midcentury climate goals. Near the end of 2022, the US Department of Energy [announced](#) more than \$1 billion in funding made available by the Bipartisan Infrastructure Law to help the development of four regional DAC hubs.

These hubs will be critical to the US' broader decarbonization strategy. Establishing regional DAC hubs will support the development of shared CO₂ transport and storage infrastructure, helping to achieve large-scale net negative emissions goals and cost-effective economies of scale. However, there is still much to learn about the opportunities and challenges for DAC hubs in the US, including identifying the best potential hub locations.

Register here: [Virtual event: Direct Air Capture Atlas Webinar](#)

Reminder: Register Now for the I³ Industrial Decarbonization 101 Centering Solutions for States Webinar

Join the Industrial Innovation Initiative on February 15 at 11:00 AM CT for a high-level overview of the industrial sector, its emissions, and the solutions states can support to enable urgent and equitable emissions reductions, followed by a moderated audience Q&A. I³ is delighted to be joined by several of the Initiative's industry and policy experts.

Register here: [Initiative's Industrial Decarbonization 101 Centering Solutions for States](#)

GPI Legislative Tracking is Getting Bigger and Better!

RDI is partnering with one of the Great Plains Institutes' other initiatives – the [Industrial Innovation Initiative](#) – to expand our legislative tracking in a comprehensive, biweekly in-depth digest. While we'll still provide short legislative updates in the RDI update during weeks we don't send the digest, be on the lookout for the first digest later today.

Read bill updates in our [legislative tracker](#).

More Regional Clean Hydrogen Hubs Share “Encouraged by DOE Status”

Following the US Department of Energy's Office of Clean Energy Demonstrations (OCED) notice of encouragement to 33 of 79 applicants to the Regional Clean Hydrogen Hubs program, applicants have continued to share their status. This week, Delaware announced its participation in the [Mid-Atlantic Hydrogen Hub](#), which joined coalitions including the [Indiana Coalition](#) in sharing that DOE has encouraged them to submit a full application before April 7, 2023.

OCED is likely to make final selections on hubs in the Summer of 2023, with up to 7 billion in funding available for 7-10 regional hubs. Although OCED did not publicly share which applicants were encouraged to apply, all applicants are free to share their status.

Since we last shared an update on applications in late January, at least 20 and potentially 22 other applicants have also shared their “encouraged” status, although coverage is scarce for some applications.

1. **Alliance for Renewable Clean Hydrogen Energy Systems (ARCHEs H2)**: [statement](#)
2. **Appalachian Regional Clean Hydrogen Hub (ARCH2)**: [statement](#)
3. **Decarbonization Network of Appalachia (DNA)**: [statement](#)
4. **Great Lakes Clean Hydrogen Coalition**: [statement](#)
5. **Greater St. Louis and Illinois Regional Clean Hydrogen Hub Industrial Cluster**:
[potentially encouraged](#) coverage scarce
6. **HALO Hydrogen Hub**: [statement](#)
7. **HARVEST Hydrogen Hub Coalition**: [statement](#)
8. **Hawaii Pacific Hydrogen Hub**: [statement](#)
9. **Heartland Hydrogen Hub**: [likely encouraged](#)
10. **Horizons Clean Hydrogen Hub (HCH2)**: [statement](#)
11. **HyVelocity Hub**: [statement](#)
12. **Indiana Coalition**: [statement](#)
13. **Mid-Atlantic Clean Hydrogen Hub**: [statement](#)
14. **Mid-Continent Hydrogen Hub**: [potentially encouraged](#), coverage scarce

15. **Midwest Alliance For Clean Hydrogen (MACHH2)**: [statement](#)
16. **Northeast Regional Clean Hydrogen Hub**: [statement](#)
17. **Obsidian Pacific Northwest Hydrogen Hub**: [statement](#)
18. **Pacific Northwest Hydrogen Association (PNWH2)**: [statement](#)
19. **Southeast Hydrogen Hub**: [statement](#)
20. **Southwest Clean Hydrogen Innovation Network**: [potentially encouraged](#), coverage scarce
21. **Trans Permian H2Hub**: [statement](#)
22. **Western Interstate Hydrogen Hub (WISHH)**: [statement](#)

Interested in more information about the hydrogen hubs application process? OCED held an [H2Hubs Applicant Informational Webinar](#) in January that provided information on expectations for applicants and Community Benefits Plans guidance.

Carbon Capture Coalition Hosts Virtual Media Briefing on Carbon Management Technologies

The Carbon Capture Coalition recently hosted an online media briefing, featuring Coalition members from the NGO, labor, and business sectors. Speakers highlighted key topics for carbon management technologies in 2023 and the subsequent challenges to deploying them. The briefing provided insights about the dramatic progress made over the course of the 117th Congress and the integral role carbon management technologies must play in the broader effort to reach net-zero emissions and as a job retention and creation engine in the years to come.

Read more in the Coalition's blog [here](#).

Watch the briefing [here](#).

DOE announces \$2.5 billion in BIL carbon management FOAs

On Thursday, February 23, the U.S. Department of Energy (DOE) announced \$2.52 billion in funding opportunity announcements (FOAs) for two carbon management programs enacted as part of the Bipartisan Infrastructure Law. The two programs, the Carbon Capture Large-Scale Pilots and the Carbon Capture Demonstration Projects Program, aim to significantly reduce carbon dioxide (CO₂) emissions from power and industrial operations.

The two funding opportunity announcements are:

- **Carbon Capture Large-Scale Pilots**: This FOA includes up to \$820 million for up to 10 projects focused on de-risking carbon capture technologies and catalyzing significant follow-on investments for commercial-scale demonstrations on carbon emission sources across the power and industrial sectors.

- **Carbon Capture Demonstration Projects Program:** This FOA includes up to \$1.7 billion for approximately six projects to demonstrate commercial-scale carbon capture technologies integrated with CO₂ transportation and geologic storage infrastructure.

DOE releases Advanced Notice for issuance of Funding Opportunities for Carbon Capture Large-Scale Pilot Projects and Carbon Capture Demonstration Projects Program

The U.S. Department of Energy's (DOE) Office of Clean Energy Demonstrations (OCED), in collaboration with the Office of Fossil Energy and Carbon Management (FECM), intends to provide up to \$2.52 billion to fund two carbon capture programs needed to reduce carbon emissions from the electricity generation and industrial sectors.

The [Carbon Capture Large-Scale Pilots](#) program will include up to \$820 million for up to 10 projects focused on scaling transformational carbon capture technologies.

The [Carbon Capture Demonstration Projects](#) program will include up to \$1.7 billion for approximately six projects to demonstrate commercial-scale carbon capture technologies, pipeline transportation, and geologic storage infrastructure. The pilot program seeks to catalyze earlier stage technologies with great potential, while the demonstrations program will focus on technologies that will further commercialization.

DOE plans to release both funding announcements in late February 2023.

DOE seeks Public Insight for Demand-side support for Clean Energy Technologies

The U.S. Department of Energy's (DOE) Office of Clean Energy Demonstrations (OCED) has released a [Request for Information](#) (RFI) to help inform the Department's development of demand-side support measures for clean energy technologies. Demand-side support measures include, but are not limited to, advanced market commitments, direct procurement, and guaranteed offtake. Specifically, DOE is looking for public input on the following:

- Cases where demand-side support measures would be useful in scaling up clean energy technologies; and
- Avenues for DOE to implement demand-side support measures, if it elects to do so.

Deadline to provide input is March 1 at 5 PM ET. View DOE's full RFI [here](#).

California Organizations Plan Direct Air Capture Hub Project

Carbon TerraVault Holdings, LLC announced earlier this week that they have convened a group of organizations to form the California DAC Hub Consortium. The consortium will work together to apply for funding from the US DOE to start a DAC hub project in Kern County, CA.

Read more [here](#).

New Report Suggests Environmental Justice Guidance for Carbon Removal

Carbon 180 and XPrize recently released [announced](#) the release of a new report, *From the Ground Up: Recommendations for Building an Environmentally Just Carbon Removal Industry* where they offer suggestions and guidance on how to incorporate environmental justice considerations into the carbon removal industry. The report sets the stage by describing the historical context of environmental justice and further explains why environmental justice is important for carbon removal companies. Near the end of the report, they share a set of community engagement guidelines for integrating fair decision making, which include suggestions on making community engagement meetings accessible and making information widely available to the public.

The report offers these concluding thoughts *"EJ considerations should be addressed at all stages of the carbon removal project development process. Even companies just starting out can take steps today to center EJ in their business plans. Not only will prioritizing EJ help build resilience by scaling projects in a way that is sustainable, durable, and supported by communities, it will also ensure that companies are meeting the growing demand for equitable climate action. An environmentally just carbon removal industry can play a major role in efforts to bring about the transformational societal change necessary to meet the urgency of the climate crisis."*

Read more [here](#).

News Roundup

- World's Largest Carbon Capture Plant Petra Nova Gets New Lease On Life ([carbonherald.com](#))
- DOE funds bioenergy carbon capture projects | [EthanolProducer.com](#)
- Here's 3 Ways To Cut The Carbon Out Of Cement Right Now ([forbes.com](#))
- Climate tech companies say they took CO2 out of the air and trapped it in concrete for the first time - [The Verge](#)

- CarbonCure, Heirloom And Central Concrete Make Breakthrough In CO2 Removal And Storage (carbonherald.com)
 - We may be storing carbon in concrete someday - The Washington Post
 - Illinois coalition pins hopes on hydrogen hub | Energy News Network
 - Worth the Investment? Carbon Storage Funding Awarded to the Port of Corpus Christi (environmentalleader.com)
 - Biden energy agenda exposes regulatory gap - E&E News (eenews.net)
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Global News

- Denmark Grants First Carbon Storage Permits In The North Sea (carbonherald.com)
 - An Australian Petroleum Association Calls For A Carbon Capture Roadmap (carbonherald.com)
 - Equinor And Engie Take H2BE Blue Hydrogen Project To The Next Phase (carbonherald.com)
 - Indonesia Awaits Carbon Capture and Storage Projects | D-Insights (katadata.co.id)
 - New UK Government Study Shows Strong Confidence In CO2 Storage (carbonherald.com)
 - Environment Agency: Blue hydrogen plants should aim for at least 95 per cent CO2 capture rate | BusinessGreen News
 - Linde Plans to Invest \$1.8 Billion for Clean Hydrogen Project (yahoo.com)
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New podcasts, reports, statements & blogs

- Carbon capture is here—it just isn't evenly distributed | Ars Technica
 - Capturing carbon: The environmentally-friendly vacuum | Energy Magazine (energydigital.com)
 - Researchers Develop Machine Learning Algorithm To Predict CO2 Emissions (carbonherald.com)
 - End-user CO2 capture costs cheaper than expected, says new report (gasworld.com)
 - 'Game-changing' findings for sustainable hydrogen production -- ScienceDaily
 - Green hydrogen: How can it help stop climate change? | Hellenic Shipping News Worldwide
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News in the States

Alaska

- Alaska to Consider Carbon Offset and Sequestration Program | Planetizen News

Arkansas

- Lapis Energy to develop carbon, sequestration project with LSB Industries | KTVE - myarklamiss.com
- Standard Lithium Sets Up Magnolia Test Plant for Carbon Capture | Arkansas Business News | ArkansasBusiness.com

Delaware

- Delaware advances in federal hydrogen hub program (delawarebusinesstimes.com)

Illinois

- Illinois county offered payments to back Navigator carbon dioxide pipeline | Energy News Network
- Carbon capture & storage technology benefits IL ethanol, corn | Morning Ag Clips

Indiana

- CarbonSAFE Study at Heidelberg Materials' New Cement Plant in Mitchell, Indiana, Funded by U.S. DOE (yahoo.com)
- Counties in region remain 'open' to pipeline offer (myjournalcourier.com)

Iowa

- Biofuels Industry Champions Carbon Pipelines Under State Legislative Challenges (dtnpf.com)
- Area farmer defends carbon pipeline projects – KIWARadio.com

Louisiana

- Livingston Parish agrees to lift halt on carbon capture data-collecting wells | News | livingstonparishnews.com
- Louisiana slams EPA over lack of urgency on carbon-project approvals | Reuters
- Hydrogen rainbow could lead to economic gold for Louisiana | Business | theadvocate.com
- LSU professor proposes plan to convert orphan oil wells into carbon-neutral production wells (worldoil.com)

Minnesota

- Minn. governor trusts energy law will survive ND suit threat - The Washington Post

New Mexico

- New Mexico Carbon Sequestration Bill Moving Forward (carbonherald.com)

North Dakota

- North Dakota Public Service Commission sets hearing dates for Summit Carbon Solutions | WDAY Radio (wdayradionow.com)
- Hoeven, EERC welcome grant to improve carbon dioxide capture technology - Grand Forks Herald | Grand Forks, East Grand Forks news, weather & sports
- Burleigh County hearing on proposed pipeline ordinance draws crowd; 2nd ordinance in the works (bismarcktribune.com)

South Dakota

- Carbon pipeline bill clears the House floor in victory for landowners (argusleader.com)
- South Dakota Committee advances bill to stop carbon pipelines from using eminent domain- Nebraska Examiner
- House State Affairs Committee kills two more eminent domain bills aimed at carbon dioxide pipelines | DRGNews
- Gevo, maker of biofuel for jets, adding South Dakota plant to Summit Carbon pipeline - Mitchell Republic | News, weather, sports from Mitchell South Dakota
- Where sustainability & economic development intersect | SDPB

Texas

- Linde (LIN) to Supply Clean Hydrogen to OCI's Texas Plant (yahoo.com)
- Houston's future may rely on carbon capture, but is it cover for Big Oil? (houstonchronicle.com)
- South Texas residents say LNG project's carbon capture promises ring hollow | The Texas Tribune

Wyoming

- More carbon capture requirements could be ahead for wyoming | Casper Star Tribune
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Upcoming events

February 15

- Industrial Decarbonization 101: Centering Solutions for States
See featured stories.

February 22

- [World Hydrogen Blue, CCS & Pyrolysis — World Hydrogen Leaders](#)
As the innovation and scope of projects around blue hydrogen and carbon capture and storage (CCS) continues, join World Hydrogen Leaders for our second edition of our virtual World Hydrogen Blue, CCS & Pyrolysis conference, where we will assess the market conditions and roadmap for everything blue and turquoise. During the event, we will look to discover: technological advantages in the development of CCS technology, the role blue

hydrogen will play in transforming the highly successful existing natural gas industry, policy and regulatory frameworks for the production and export of blue hydrogen, and the applications and economics of producing solid carbon through pyrolysis.

February 23

- [Reaching Zero: Pathways to Decarbonize the US Electric System with CCS](#)

Richard Middleton, CEO of Carbon Solutions LLC, will be presenting on the Pathways to Decarbonize the US Electric System with CCS.

March 2

- [Virtual event: Direct Air Capture Atlas Webinar](#)

See featured stories.

March 6-10

- [CERAWeek S&P Global](#)

CERAWeek brings together global leaders to advance new ideas, insight and solutions to the biggest challenges facing the future of energy, the environment, and climate. CERAWeek is widely considered to be the most prestigious annual gathering of CEOs and Ministers from global energy and utilities, as well as automotive, manufacturing, policy and financial communities, along with a growing presence of tech.

About the Regional Carbon Capture Deployment Initiative: The Regional Carbon Capture Deployment Initiative brings together state officials with diverse industry, NGO, labor, and other stakeholders to promote broad scale deployment of infrastructure for carbon management. The Initiative is staffed by the Great Plains Institute (GPI), a nonpartisan nonprofit working to transform the energy system to benefit the economy and environment.

Subscribe or request to add an event, news story, report, blog, or job posting to the update by reaching out to [Emma Thomley](#). Looking for more carbon management updates, studies, and fact sheets? Visit us at [Carbon Capture Ready](#) and read previous newsletters in our Action Alliance's [newsletter archive](#).