

May 6, 2022

DOE Announces 2.3 billion Investment to Reduce U.S. Carbon Emissions

The Department of Energy (DOE) announced more than \$2.3 billion in funding for three efforts to advance diverse carbon management approaches that reduce carbon dioxide (CO₂) pollution, address the impacts of climate change, and create good-paying jobs while prioritizing community engagement and environmental justice. The DOE's Office of Fossil Energy and Carbon Management (FECM) will manage the following three opportunities:

- Carbon Storage Assurance Facility Enterprise (CarbonSAFE) Initiative: Phases III, III.5, and IV" Notice of Intent (NOI). The \$2.25 billion NOI is funded by the Bipartisan Infrastructure Law, to accelerate geologic carbon storage projects each capable of permanently storing at least 50 million metric tons of captured CO₂
- "CarbonSAFE: Phase II Storage Complex Feasibility" Funding Opportunity
 The \$45 million funding opportunity is designed to improve procedures to define and
 assess onshore and offshore CO₂ storage sites at a commercial scale safely, efficiently,
 and affordably.
- "Carbon Management" Funding Opportunity
 The \$46 million funding opportunity will develop technologies to remove, capture, and convert or store carbon dioxide from utility and industrial sources or the atmosphere.

 Projects will examine commercial viability and technical gaps, while also examining environmental impacts and justice implications of the technologies.

Direct Air Capture Reports Released

This week, the World Resources Institute (WRI), in collaboration with the University of Pennsylvania, and Carbon180 released reports featuring Direct Air Capture, or DAC. In WRI's report, *Direct Air Capture: Assessing Impacts to Enable Responsible Scaling*, authors discuss the expected environmental impacts of building and operating DAC plants in the United States. The paper provides considerations related to decision-making and DAC siting, including responsible scaling and equitable distribution of benefits, as well as policy and procedural recommendations.

Carbon 180's report, *Setting DAC on Track*, focuses on DAC hubs and explores the potential ways federal funding could be used to effectively deploy the hubs. The report offers recommendations to help build political support, validate DAC technologies, and catalyze the momentum needed to build projects globally. Specifically, the paper identifies recommendations for the US DOE, suggesting how the agency can focus DAC hubs' implementation on justice, equity, and economic opportunity, alongside engineering and techno-economic efforts.

Mitsui and CF Industries to Develop Ammonia Facility with Carbon Capture

Mitsui & Co., Ltd. one of the leading ammonia marketers in the world, and CF Industries Holdings, Inc., the world's largest producer of ammonia have announced their intention to develop a blue ammonia production facility in the US Gulf Coast region. The facility will reduce it's carbon emissions by more than 60 percent using carbon capture and storage, producing what's known as "blue ammonia."

Mitsui will lead the marketing and distribution for the blue ammonia into Asia while CF will be responsible for plant operations and maintenance.

Associated news coverage:

- Mitsui & Co., Ltd. and CF Industries Announce Plans for New Blue Ammonia Capacity in the United States | Business Wire
- US CF Industries and Mitsui announce plans for new US blue ammonia capacity | ICIS

Chevron Joins Texas Offshore Storage Project

Chevron recently signed a Memorandum of Understanding (MOU) with Talos Energy and Carbonvert and will take a 50 percent state in the Bayou Bend CCS offshore carbon capture and sequestration project in the Gulf of Mexico. The project is the first US offshore lease dedicated to CO₂ storage, is located off the coast of Jefferson County, Texas, and could hold up to 275 million metric tons of captured carbon dioxide (CO₂) from nearby industrial sources.

Following the signing of the MOU, Talos and Carbonvert will each hold 25 percent equity in the project, with Talos remaining the operator.

Associated news coverage

- Chevron joins Bayou Bend CCS project in southeast Texas | News | gasworld
- Chevron Joins Gulf of Mexico Carbon Capture and Storage Project (gcaptain.com)
- Chevron, Talos and Carbonvert Announce Proposed Joint Venture Expansion to Enhance the Bayou Bend CCS Project Offshore Jefferson County, Texas | Business Wire
- Talos Energy TALOS, CARBONVERT AND CHEVRON ANNOUNCE PROPOSED JOINT VENTURE EXPANSION TO ENHANCE THE BAYOU BEND CCS PROJECT OFFSHORE JEFFERSON COUNTY, TEXAS
- Chevron joins first-of-its-kind Gulf Coast carbon sequestration project | Grist
- Chevron wades in to Bayou Bend offshore CCS | Upstream Online

Join GPI's Carbon Management Team!

The Great Plains Institute is currently seeking applications for an Action Network Manager, Public Relations and Communications Strategist, Research Manager, and Labor Engagement Manager for its Carbon Management Program. For additional information, please see the job postings below.

- Carbon Management Action Network Manager
- Carbon Management Public Relations and Communications Strategist
- Carbon Management Research Manager
- Carbon Management Labor Engagement Manager

State Carbon Management Legislative Highlights

Introduced

- California: SB 1399, Carbon capture and storage pilot program: industrial facilities,
- Maryland: HB 1366, Zero–Emission Energy Resources and Carbon Capture, Use, and Sequestration Renewable Energy Portfolio Standard and Study,
- **Pennsylvania:** HR 183, A Resolution urging the Biden Administration and the Congress of the United States to designate this Commonwealth as a hydrogen hub

First Committee

- California: SB 905, Decarbonized Cement and Geologic Carbon Sequestration Demonstration Act. Geological Carbon Sequestration Amendments,
- Minnesota: SF 3661, State policy supporting the deployment of carbon capture and sequestration technologies establishment

First Chamber

• **lowa:** HF 2565, A bill for an act relating to and making appropriations... (requires the lowa Utilities Board not to set a public hearing with carbon sequestration pipeline companies requesting eminent domain before February 1st, 2023)

Second Committee

• Colorado: SB 22-193, Air Quality Improvement Investments

Enacted

- Alabama: SB 36, Oil and Gas Board, underground gas storage facilities, regulation, gas further defined to include abandonment of underground storage facilities, performance bonds, fees by board, Secs. 9-17-150, 9-17-151 am'd.,
- **Arizona:** SB 1396, Hydrogen study committee,
- Indiana: HB 1209, Carbon sequestration projects,
- Mississippi: HB 1218, Carbon dioxide geologic sequestration; revise laws regarding.
- Nebraska: LB 1099, Create the Nebraska Hydrogen Hub Industry Work Group,
- Ohio: HB 175, Deregulate certain ephemeral water features (this bill includes class VI injection well process recommendations)

- **South Dakota:** HB 1120, Include carbon dioxide and carbon dioxide capture companies in certain provisions regarding pipeline taxation,
- Utah: HB 244, Geological Carbon Sequestration Amendments,
- West Virginia: HB 4491, To establish requirements for carbon dioxide sequestration,
- Wyoming: SF 47, Carbon storage and sequestration-liability.

Read RDI's weekly legislative update to see all tracked bills related to carbon management.

New Speakers AND Moderators Confirmed for GPI's Upcoming Conference

We are pleased to announce that **Dr. Holly Buck**, Assistant Professor of Environment and Sustainability at the University at Buffalo has joined our terrific lineup of speakers for our panel on "Fostering Environmental Justice and Facilitating Community Engagement". **Dr. Rodney Andrews**, Director of the Center for Applied Energy Research and Professor of Chemical Engineering at the University of Kentucky will join our panel "Spotlight on Carbon Management Projects Under Development."

Kristen Carter, Assistant State Geologist for the Economic Geology Division at the PA Geological Survey will moderate our panel on "Carbon Management at Scale: Building Regional Carbon and Hydrogen Hubs" and **Sarah Forbes**, Director of Carbon Capture Utilization and Sequestration at the White House Council on Environmental Quality will moderate our panel on "Ensuring Pipeline Safety".

Our tremendous group of speakers for *Turning Federal Investment into Action: Scaling Carbon Management Technologies and Infrastructure*, the RDI's in-person event on May 25 and 26 in Louisville, Kentucky, with more to be announced soon, is listed below, and will address the benefits of carbon management, discuss ongoing projects and explore ways to support projects.

We invite you to register for *Turning Investment into Action: Scaling Carbon Management Technologies* here.

Speakers

- Dr. Rodney Andrews, Director of the Center for Applied Energy Research and Professor of Chemical Engineering, University of Kentucky
- William Bates, Branch Chief, Prevention Branch, Environmental Protection Agency
- Dr. Holly Buck, Assistant Professor of Environment and Sustainability, University at Buffalo
- Cindy Crane, CEO, Enchant Energy
- **Linda Daugherty**, Deputy Associate Administrator for Field Operations, Pipeline and Hazardous Materials Safety Administration
- Tom Dower, Vice President Public Policy, LanzaTech
- Ryan Edwards, Senior Carbon Management Policy Advisor at Oxy Low Carbon Ventures
- Tracy Evans, CEO and Founder, CapturePoint
- Matt Fry, Senior Policy Manager, Great Plains Institute

- **Jon Kehmeier**, Vice President of Scientific and Technical Services, Steven W. Carothers & Associates
- Secretary Becky Keogh, Cabinet Secretary, Arkansas Department of Energy and Environment
- Kris Koski, Professional Land Management Director and Associate Lecturer, University
 of Wyoming School of Energy Resources
- Patrice Lahlum, Program Consultant, Great Plains Institute
- Jason Lanclos, Director, State Energy Office, Louisiana Department of Natural Resources
- Karen Matusic, Senior Director of External Affairs: Appalachia/Tri-state Region, Equinor
- Glen Murrell, Director, Wyoming Energy Authority
- Dr. Simone H. Stewart, Industrial Policy Specialist, National Wildlife Federation
- Jennifer Zygmunt, Administrator, Water Quality Division, Wyoming Department of Environmental Quality

Moderators

- Matt Bright, Carbon Capture Policy Manager, Clean Air Task Force
- Kristen Carter, Assistant State Geologist for the Economic Geology Division, PA Geological Survey
- Dr. Steven M Carpenter, Managing Partner, Carpenter Global, LLC
- Dr. Meron Tesfaye, Senior Policy Analyst, Bipartisan Policy Center

News Roundup

- Energy & Environment Lawmakers weigh carbon import tariff | The Hill
- 4 Stumbling Blocks That Could Derail Manchin's Bipartisan Energy Effort (businessinsider.com)
- Large-Scale Hydrogen Projects Take Shape as Technology Continues to Evolve (powermag.com)
- The race is on to build out a low-carbon hydrogen economy in Appalachia | 90.5 WESA
- Scaling hydrogen in North America will require policy support beyond infrastructure funding, panel says | Utility Dive
- Energy industry's transformation: Look at the Gulf of Mexico (houstonchronicle.com)
- Bipartisan energy gang eyes 'Santa's list' of tax credits E&E News (eenews.net)
- Alito: The Supreme Court's next environmental law juggernaut? E&E News (eenews.net)
- POLITICO Pro | Article | Chevron inks deal to develop first U.S. offshore CCS hub
- Chevron joins Bayou Bend CCS project for first offshore carbon capture hub in US Gulf | S&P Global Commodity Insights (spglobal.com)
- OTC 2022: Talos Energy CEO Charts Path from Shallow Water to Carbon Capture | Hart Energy (ampproject.org)
- Democrats, Republicans try to find agreement on tax credits for clean energy (houstonchronicle.com)
- CCUS: Where is carbon capture working? Energy Monitor (power-technology.com)

Global News

- NGen gives \$76 million in funding for EV innovation projects | The Star
- EU's Innovation Fund launches €100M call for innovative low-carbon projects Offshore Energy (offshore-energy.biz)
- West Lake Energy Announces Carbon Sequestration Hub Proposal, Setting the Foundation for a Transformational Green Energy Centre in Southern Alberta (yahoo.com)
- Three organisations teaming up to unlock UK's full carbon capture and storage potential
 Offshore Energy (offshore-energy.biz)
- Pioneering CO2 export terminal underway in Germany Bellona.org
- Israeli balloon tipped as world's 1st affordable, scalable method for carbon capture | The Times of Israel
- Springtime for UK's carbon capture ambitions (energyvoice.com)

New podcasts, reports, statements & blogs

- America's net-zero frontier: A business guide | McKinsey
- Argonne Plays Key Role in Advancing Hydrogen for Clean Energy | Illinois | wsiltv.com
- Ensuring Energy Department direct air capture hubs succeed Protocol
- Blue Hydrogen can be carbon neutral with CCUS | OUR GREAT MINDS (theogm.com)
- Facebook and Google are spending big on carbon removal. Should the government, too? | Grist
- CSRWire A Novel Retrofit Solution for Existing Pipelines
- NextDecade Gains as Engie Agrees to Buy Once-Snubbed U.S. LNG Bloomberg
- Hydrogen Power 101 Power Costs, Inc. (PCI) Blog
- Columbia | SIPA Center on Global Energy Policy | Hydrogen: A Hot Commodity Lacking Sufficient Statistics
- Growing the carbon dioxide removal market | Canary Media
- What you need to know about carbon dioxide removal » Yale Climate Connections
- Catalytic Regional Investments: Demystifying DAC and Hydrogen Hubs | Bipartisan Policy Center

News in the States

Arkansas

- LSB Taking On Arkansas CO2 Capture Project for Blue Ammonia Natural Gas Intelligence
 - Lapis Energy, a first project in Arkansas. Energynews.pro
- Chemical makers plan blue ammonia projects (acs.org)
- OKC-based LSB Industries announces carbon capture project | The Journal Record

California

- NEXT Carbon Solutions and California Resources Corporation Agree to FEED Study | Business Wire
- Lower cost, slower gains: California prepares controversial new climate strategy | cbs8.com
- Symposium highlights local opportunities, challenges of carbon storage | News | bakersfield.com

Illinois

- In key House race in Illinois, climate change is on the ballot The Washington Post
- Way Down in the Hole, Part 8 Trio of Projects Target Carbon Capture from Midwest Ethanol Plants | RBN Energy
- Vacuuming carbon from the air could help stop climate change. Not everyone agrees | NPR Illinois

lowa

- Page County board states opposition to eminent domain | News | kmaland.com
- Supervisors eye letter to support new rules for pipeline | Daily Democrat | mississippivalleypublishing.com
- Numbers show majority of impacted lowa counties object to proposed pipelines |
 Community | globegazette.com
- Iowa CO2 pipeline opponents see lessons in DAPL fight | Energy News Network

Kentucky

• UK, Nucor Steel Gallatin Partnering on Unique CO2 Capture Project | UKNow (uky.edu)

Louisiana

• Companies plan carbon capture transport to Livingston Parish (businessreport.com)

Michigan

 Vacuuming carbon from the air could help stop climate change. Not everyone agrees (michiganradio.org)

Minnesota

POLITICO Pro | Article | Minn. approves framework to assess alternatives to gas

Montana

• Montana Public Service Commission Holds Listening Session on MDU's 2021 Biennial Electric Integrated Resource Plan - The Roundup (roundupweb.com)

North Dakota

- Bitcoin Miners pushing back against environmentalists and more things to know in energy this week | Oil And Energy | willistonherald.com
- Burgum, Sanford laud historic transfer of Coal Creek Station, transmission line to Rainbow Energy, Nexus Line | North Dakota Office of the Governor (nd.gov)
- Plain Talk: Landowners want a better deal on the Midwest Carbon Express pipeline -InForum | Fargo, Moorhead and West Fargo news, weather and sports

Ohio

 Tech Businesses, Ohio Chamber Push Plan for Clean Hydrogen Hub - Columbus Underground

Oklahoma

• OKC-based LSB Industries announces carbon capture project | The Journal Record

Pennsylvania

• Report Calls for Regional Climate Goals in Western Pennsylvania (wjenergy.org)

South Dakota

- SPECIAL REPORT: Proposed CO2 pipelines thrust South Dakota into billion-dollar debate over carbon capture technology and climate change - South Dakota News Watch (sdnewswatch.org)
- Here's what safety regulations Summit Carbon Solutions needs to follow (aberdeennews.com)

Texas

- Chevron, Talos and Carbonvert Announce Proposed Joint Venture Expansion to Enhance the Bayou Bend CCS Project Offshore Jefferson County, Texas | Business | The Daily News (galvnews.com)
- Railroad Commission wants to oversee carbon capture and storage (houstonchronicle.com)
- Texas oil regulator takes key step toward oversight of carbon storage permits | Reuters
- Texas' oil regulator says it is working towards application to gain permitting primacy for Class XI carbon capture wells | WTVB | 1590 AM · 95.5 FM | The Voice of Branch County (wtvbam.com)
- Enbridge and Humble Midstream to Develop Low-carbon Hydrogen and Ammonia Production and Export Facilities at Enbridge Ingleside Energy Center (prnewswire.com)
- Texas companies partner up to move carbon dioxide along the Mississippi River corridor | Business | theadvocate.com

West Virginia

 WV: West Virginia legislative leaders all in on federally funded hydrogen hub that critics call a costly gamble | Mass Transit (masstransitmag.com)

Wisconsin

 UW–Madison's ultra-efficient carbon capture tech earns top 60 spot in global XPRIZE challenge | All In Wisconsin

Wyoming

- World News | Exxon Profits Surge Despite USD3.4B Hit from Russian Exit | LatestLY
- Keeping Coal Relevant: University of Wyoming Leads the Way (powermag.com)

Upcoming events

May 10

• Hydrogen Hubs: Decarbonizing Industry, Transport and Power Generation

May 11

- Key Questions on DAC Hubs Implementation (mailchi.mp)
- Next Frontier Energy Summit Wyoming Energy Authority (wyoenergy.org)

May 12

 USEA CONSENSUS Webinar: Hydrogen Market Module Component Design Report | USEA | United States Energy Association

May 16

 Charting an Energy Transition Path Towards Economic Growth: ACCD and Team PA Event

May 17 - 18

• Register for the 2022 Western Prosperity Roundtable Forum | WGA (westgov.org)

May 19 - 20

• Workshop | CCU TEA and LCA Guidance – A Harmonized Approach

May 25 - 26

 Turning Federal Investment into Action: Scaling Carbon Management Technologies and Infrastructure

June 7

 WEBINAR - High integrity isolation solutions for CO2 and hydrogen pipelines | World Pipelines

June 14-16

 Registration North America 2022 - Carbon Capture Technology Conference & Expo North America 2022 (ccus-expo.com)

June 26 - 30

• 19th Annual International Conference on Carbon Dioxide Utilization

June 30

• Direct Air Capture Summit, hosted by Climeworks

To subscribe or request to add an event, news story, report, blog, or job posting to the update please reach out to Emma Thomley at EThomley@gpisd.net. To read more carbon management updates, studies, and fact sheets, visit us at Carbon Capture Ready.

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