

March 25, 2022

Connecticut, New York, New Jersey, and Massachusetts to Collaborate on Hydrogen Hub Proposal

Yesterday Governors of Connecticut, New York, New Jersey, and Massachusetts announced their states will collaborate to establish a regional hub for the development, production, and use of clean hydrogen. The three states will work together alongside 40 partners in the hydrogen ecosystem to compete for funding from the Infrastructure Investment and Jobs Act (IIJA) which allocates \$8 billion towards four regional hydrogen hubs.

The partners will propose a hydrogen hub that addresses climate change and improves the health, resiliency, and economic development of the region's residents, with environmental justice central to its strategy. They aim to deliver opportunities and improve quality of life to under resourced areas across the region and support environmentally responsible opportunities to develop hydrogen.

Associated News Coverage:

- Governor Lamont Announces Connecticut Partners With New York, New Jersey, and Massachusetts To Develop Regional Clean Hydrogen Hub Proposal
- Governor Hochul Announces Multi-State Agreement Signed with Major Hydrogen Ecosystem Partners to Propose a Regional Clean Energy Hydrogen Hub | Governor Kathy Hochul (ny.gov)
- Governor Murphy, Governor Hochul, Governor Baker, and Governor Lamont Announce Multi-State Partnership with Major Hydrogen Ecosystem Partners to Propose a Clean Regional Hydrogen Hub - Insider NJ
- New York, New Jersey Sign Pact to Pursue Hydrogen Hub Plan in Climate Push -Bloomberg
- Office of the Governor | Governor Murphy, Governor Hochul, Governor Baker, and Governor Lamont Announce Multi-State Partnership with Major Hydrogen Ecosystem Partners to Propose a Clean Regional Hydrogen Hub (nj.gov)
- Governor Hochul Announces Multi-State Agreement Signed with Major Hydrogen Ecosystem Partners to Propose a Regional Clean Energy Hydrogen Hub - NYSERDA

Occidental to Build World's largest Direct Air Capture facility in Texas

Occidental has proposed the world's largest direct air capture (DAC) project, which is set to begin construction in the second half of this year in the U.S. Permian basin. The facility has a goal of removing 1 million tonnes of CO_2 from the atmosphere per year and would be part of a larger suite of carbon capture projects, including three carbon sequestration hubs. The company anticipates these hubs coming online by 2025 in addition to 70 direct air capture facilities by 2035.

Related news coverage:

- Occidental plans up to \$1 billion for facility to capture carbon from air | Nasdaq
- Occidental plans up to \$1 bln for facility to capture carbon from air | Reuters
- Occidental (OXY) Plans 70 Plants to Capture Carbon From Air by 2035 Bloomberg
- Occidental reveals plans for world's largest direct air carbon capture facility in Texas (houstonchronicle.com)

Wyoming DEQ Updates Class VI Information

The Wyoming Department of Environmental Quality (WDEQ) has recently updated their Water Quality Division, Underground Injection Control Class VI Program webpage. The website includes updated Class VI information including a Class VI permit and operating flow chart and revised application forms. The technical portion of the permit application is now available as a report format.

<u>Save the Date</u> for the RDI Event, *Turning Federal Investment into Action: Scaling Carbon Management Technologies and Infrastructure*

Great Plains Institute will be scheduling its first in-person event since 2020, *Turning Federal Investment into Action: Scaling Carbon Management Technologies and Infrastructure*, an RDI conference to be held on **May 25 and 26, 2022** in Louisville Kentucky.

This national leadership event will explore how states can use carbon management as an integral process for emissions reduction, domestic energy production, and job creation strategies. The two-day conference will focus on the current state of project development both nationally and regionally, policy challenges and solutions, and include presentations from Kentucky-based and national project proponents.

Turning Federal Investment into Action will bring together a broad cross-section of leaders from industry, finance, investment and procurement, NGOs, labor, states and the federal government, philanthropy, the media and other sectors. The agenda will offer an engaging combination of main stage talks and interactive panel dialogues addressing key themes and priorities, including:

- Carbon management and its benefits to the U.S. and globally;
- Ways to utilize enacted federal legislation (e.g. IIJA) to incentivize deployment of carbon management projects;

- Key foundational state policies and statutes that can support the deployment of carbon management projects;
- Working with federal regulations and procedures to ensure we are able to deploy carbon management projects at the necessary scale to achieve our objectives;
- Strategies to ensure that projects are built in a manner that adequately benefits individuals and communities; and
- Insights from companies and organizations that are actively pursuing and/or developing carbon management projects.

A public announcement with more details of the event will be shared next week.

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

• California: SB 1399, Carbon capture and storage pilot program: industrial facilities, was referred to committee. The bill requires the State Energy Resources Conservation and Development Commission, in consultation with various local, state, and federal agencies, including the state board, to establish a pilot program to encourage and expedite the design, construction, and operation of carbon capture and storage projects at industrial facilities in the state. As part of the pilot program, the bill would require the commission to establish a competitive grant program to provide funding to no more than 3 proposed projects for the design and construction of a carbon capture and storage project at an industrial facility.

Bills previously referenced in the update include:

- 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.
- California: SB 905, Decarbonized Cement and Geologic Carbon Sequestration Demonstration Act. Geological Carbon Sequestration Amendments,
- Indiana: HB 1209, Carbon sequestration projects,
- Maryland: HB 1366, Zero–Emission Energy Resources and Carbon Capture, Use, and Sequestration Renewable Energy Portfolio Standard and Study,

- **Minnesota:** SF 3661, State policy supporting the deployment of carbon capture and sequestration technologies establishment (passed committee, March 14)
- Mississippi: HB 1218, Carbon dioxide geologic sequestration; revise laws regarding,
- Nebraska: LB 1099, Create the Nebraska Hydrogen Hub Industry Work Group,
- **Pennsylvania:** House Resolution 183, A Resolution urging the Biden Administration and the Congress of the United States to designate this Commonwealth as a hydrogen hub
- **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

News Roundup

- Industry leaders to speak at Wood Mackenzie's inaugural (globenewswire.com)
- Ukraine war could extend bump in US coal use, but utilities remain confident in decarbonization path | Utility Dive
- POLITICO Pro | Article | Granholm: Fighting energy supply disruptions and climate change is 'not a binary choice'
- DOE eyes hydrogen, thermal storage to shrink carbon footprint of fossil fuel plants | Utility Dive
- Occidental Petroleum (OXY) Will Sell 'Net-Zero Oil' to Korean Refiner Bloomberg
- What's Next for LanzaTech, the Carbon Capture Company? (triplepundit.com)
- US coal sector takes steps toward greener future | Hellenic Shipping News Worldwide
- LanzaTech, ReCarbon, Woodside team up on carbon capture and utilization project in Australia : Biofuels Digest
- SHV Energy, LanzaTech partner to produce renewable propane LP Gas : LP Gas (lpgasmagazine.com)
- Joint Statement between the United States and the European Commission on European Energy Security | The White House
- Navigator signs letters of intent with 4 national labor unions | EthanolProducer.com
- DOE Gets Hydrogen Hub Advice from Industry and Others | RTO Insider
- Manchin outlines energy policy objectives | TheHill

Global News

 Dastur completes feasibility study of carbon capture and utilization project at IOC Koyali refinery - The Hindu BusinessLineGermany's first CO2 hub planned for Bremen | News | gasworld

- Oslo leading by example: world's first CO2 capture and storage on waste incinerator to become reality in 2026 Bellona.org
- Microsoft, Aker scale carbon capture for net zero future | News | gasworld
- Denmark asks for input on tender plan and executive order for CO2 storage in North Sea Offshore Energy (offshore-energy.biz)
- Air Liquide and Eni to cooperate for the decarbonization of hard-to-abate industries in Europe | Business Wire
- Air Liquide and Eni to cooperate for the decarbonization of hard-to-abate industries in Europe | Business Wire
- TotalEnergies launches carbon capture pilot project in Dunkirk | Hydrocarbon Engineering
- Woodside partners with US technology players to develop Australian carbon capture and utilisation plant | Upstream Online
- Rystad Sees CCS Spending Above \$50 Billion by 2025

New podcasts, reports, statements & blogs

- Report: Energy Transition for All | ACP (cleanpower.org)
- Jason Bordoff and Meghan O'Sullivan on maintaining energy supply while still hitting climate-change goals | The Economist
- Jennifer Holmgren: from alternative fuels pioneer to carbon recycling queen | Greenbiz
- Carbon capture: To fight climate change we need to do more than stop climate pollution. We need to reverse it. | Environmental Defense Fund (edf.org)
- The case for direct air capture (acs.org)
- How Ammonia Could Help the World Transition to Clean Energy (powermag.com)
- What to know about 5 big plans for U.S. carbon removal | Greenbiz

News in the States

California

- Will SoCalGas' use of hydrogen help fight climate change? Los Angeles Times (latimes.com)
- Is hydrogen a climate savior? Cutting through the hype Los Angeles Times (latimes.com)
- Bill Gates backs a carbon-capture start-up that uses dirt cheap material (inquirer.com)
- Green Hydrogen: The New Star Of The Clean Energy Revolution | HuffPost Impact

Colorado

- University of Colorado Boulder researchers develop better tool for CCSU : Biofuels
 Digest
- SMDC COLORADO LEGISLATIVE STRATEGIES NEWSLETTER The Villager (villagerpublishing.com)

Illinois

- Advocates urge Illinois landowners to prepare for risks from CO2 pipelines | State/Region | thesouthern.com
- Montgomery County board hears pipeline concerns | News | kmaland.com

lowa

- Summit Carbon reps field questions at Brown County Commission meeting (aberdeennews.com)
- A growing battle over carbon capture and climate change riles lowa (nbcnews.com)
- Iowa Utilities Board struggles with Summit pipeline hearing location (desmoinesregister.com)

Louisiana

- Denbury Resources adds a trio of Louisiana sites for carbon dioxide storage | Upstream Online
- Carbon Capture Spending Forecast to Surge Over Next Three Years Natural Gas Intelligence

Massachusetts

- Governor Lamont Announces Connecticut Partners With New York, New Jersey, and Massachusetts To Develop Regional Clean Hydrogen Hub Proposal
- What's the future of gas in Mass.? Utilities and critics have different visions | WBUR News

Nebraska

• Navigator, Siouxland Ethanol Reach Long-Term Carbon Capture Agreement - Natural Gas Intelligence

New Jersey

- Governor Murphy, Governor Hochul, Governor Baker, and Governor Lamont Announce Multi-State Partnership with Major Hydrogen Ecosystem Partners to Propose a Clean Regional Hydrogen Hub - Insider NJ
- Office of the Governor | Governor Murphy, Governor Hochul, Governor Baker, and Governor Lamont Announce Multi-State Partnership with Major Hydrogen Ecosystem Partners to Propose a Clean Regional Hydrogen Hub (nj.gov)

New Mexico

- Group, including New Mexico, makes pitch for hydrogen hub federal funds | Local News | santafenewmexican.com
- Western Inter-States Hydrogen Hub Responds to U.S. Department of Energy Request for Information | Office of the Governor Michelle Lujan Grisham
- Universal Hydrogen picks New Mexico for major manufacturing hub | Your Money | kulr8.com
- New Mexico, Western Inter-States Hydrogen Hub Responds To U.S. Department Of Energy Request For Information (ladailypost.com)

New York

- Two hydrogen plants expand with new partner BIC Magazine
- New York, New Jersey Sign Pact to Pursue Hydrogen Hub Plan in Climate Push Bloomberg
- Governor Hochul Announces Multi-State Agreement Signed with Major Hydrogen Ecosystem Partners to Propose a Regional Clean Energy Hydrogen Hub - NYSERDA

North Dakota

- Richland officially opposes eminent domain for Summit project | News Monitor | wahpetondailynews.com
- Sen. Cramer Highlights Need for Increased Domestic Energy Production, North Dakota Carbon Capture Project at EPW Hearing (senate.gov)
- 'Pore space' a growing issue for North Dakota's energy industry, landowners | State & Regional | bismarcktribune.com

Oklahoma

• Oklahoma's hydrogen fuel industry could get a shot in the arm from a new bill - H2 News (hydrogenfuelnews.com)

Pennsylvania

- POLITICO Pro | Article | Pa. LNG project suspended following environmental challenge
- Wyalusing natural gas plant on hold after legal challenge (mytwintiers.com)
- Pittsburgh Works Together unveils plan to boost manufacturing Pittsburgh Business Times (bizjournals.com)
- Industry and labor coalition has some advice for Pennsylvania's next governor | Pittsburgh Post-Gazette

South Dakota

- Crowd at Sioux Falls meeting expresses skepticism about proposed carbon pipeline -Mitchell Republic | News, weather, sports from Mitchell South Dakota
- Moody County Enterprise | PUC meetings this week
- Public hearings begin on proposed carbon dioxide pipeline in South Dakota | State News | bhpioneer.com
- Public hearings begin on proposed carbon dioxide pipeline in South Dakota | South Dakota | thecentersquare.com
- A look at public comments on proposed CO2 pipeline | KELOLAND.com
- Hundreds of Landowners Voice Concerns Over Pending CO2 Pipelines | Argus Leader
- Sen. Schoenbeck intervenes on CO2 route in Watertown (keloland.com)

Texas

- Texas Combined-Cycle Natural Gas-Hydrogen Project Proposed by Entergy Natural Gas Intelligence
- Occidental reveals plans for world's largest direct air carbon capture facility in Texas (houstonchronicle.com)

West Virginia

• WV leaders, fossil fuel companies chase federal hydrogen hub opportunity that opponents say is uneconomic | Energy and Environment | wvgazettemail.com

Wisconsin

• UW-Madison team developing carbon capture technology (spectrumnews1.com)

Wyoming

- Pinedale Roundup | Multi-state collaborative responds to DOE request
- Eugene Holubnyak to Direct Hydrogen Energy Research Center at UW | News | University of Wyoming (uwyo.edu)
- IEEFA: 'Carbon capture' model at Exxon's Shute Creek CCUS reveals a questionable technology and uncertain economic viability Institute for Energy Economics & Financial Analysis

Upcoming Events

March 28

• Carbon, Capture, Utilization, and Storage (CCUS) Conference | Houston (aapg.org) March 29

- The Rise of CCS in Denmark CCS Institute
- [Webinar] Developing & Financing Low Carbon Hydrogen Projects March 29th, 12:00 pm - 1:00 pm CT | Vinson & Elkins LLP - JDSupra

March 29 - 31

• Carbon, Capture, Utilization, and Storage (CCUS) Conference | AAPG

March 30

• Looking Back: Using Retrospective Analysis to Improve Federal Environmental Regulation | Resources for the Future

April 3-8

• 2022 Carbon Capture, Utilization and Storage Conference | GRC

April 6

• A Climate for Business: Secretary Granholm on Driving U.S. Innovation | Webinar April 7

• Virtual Kickoff to Regional Carbon Management Applicant Education Workshops | USEA

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 Want to read more carbon management updates, studies, and fact sheets? Visit us at Carbon Capture Ready.

About this email: You are receiving this message as part of newsletter subscription to the RDI Update. If you no longer wish to receive the weekly newsletter, you can email ethomley@gpisd.net to be removed from the list.