



REGIONAL CARBON CAPTURE DEPLOYMENT INITIATIVE

UPDATE

November 10, 2022

RDI Newsletter: Feedback Requested

We would appreciate your feedback on this newsletter's content in the following [survey](#). The survey should take no longer than 5 minutes and includes questions about the newsletter's length and content. Thank you in advance for your feedback.

Please fill out the survey [here](#)

EPA Submits Class VI Report to Congress

EPA released its [Class VI Permitting report](#) to Congress on October 31, mandated by Division G in the Consolidated Appropriations Act, 2021. The report provides background information on Class VI wells, outlines permitting regulations, and explains the EPA's permit application and review process.

The report also summarizes stakeholder feedback the agency has received about the Class VI permitting process and describes actions the EPA is currently taking in response to this feedback. In the report, EPA identified ways to improve the permitting process, including:

- Streamlining the permitting process
- Performing continuous programmatic evaluations
- Increasing public outreach, awareness, and transparency

For more information and resources on EPA's Class VI guidelines visit their [Class VI - Wells used for Geologic Sequestration of Carbon Dioxide](#) webpage.

Hydrogen Hub Proposal Updates Abound as DOE FOA Deadline Passes

The deadline to submit concept papers to the Department of Energy's Regional Clean Hydrogen Hubs [funding opportunity announcement \(FOA\)](#) passed November 7 and the week leading up to the deadline included announcements from several collaborative partnerships that are attempting to secure part of this funding.

Midwest Alliance for Clean Hydrogen (MachH2)

The [Midwest Alliance for Clean Hydrogen](#) (MachH2) [announced](#) last week its intent to submit an application to DOE to create a hydrogen hub that will benefit the region's economy and reduce emissions. The Alliance spans Illinois, Indiana, Kentucky, Michigan, Missouri, and Wisconsin and will promote commercially scalable projects. The hub will produce tens of thousands of metric tons of hydrogen per year, with plans to grow over time. The hub proposes to support an estimated 4,500 construction jobs and 400 permanent positions once complete. MachH2 has [members](#) from across the public and private sector. Sharing a commitment to environmental justice and furthering Justice40 goals, MachH2 members state that the hub will create opportunities in underinvested communities, engage diverse populations, and reduce emissions near disadvantaged communities.

Alaska Hydrogen Hub

The Alaska Gasline Development Corporation [announced](#) this week that it applied for federal funding from the DOE for a hydrogen hub, citing the state's abundant natural gas resources, favorable geology for carbon storage, and existing energy infrastructure. The hub would use natural gas from AGDC's planned [Alaska LNG project](#) with Mitsubishi Corporation, TOYO Engineering Corporation and Hilcorp Alaska as a feedstock. The project is expected to initially produce more than 600 tons per day, eventually growing to 1,600 tons of hydrogen per day in hub capacity and would store carbon dioxide emissions. The hub would be funded using public and private funding.

The Pacific Northwest Regional Hydrogen Hub

The Pacific Northwest Regional Hydrogen Hub also [submitted its concept paper this week](#). PNWH2 is a [collective of representatives](#) from the private, government, academic, research and philanthropic communities and was established following a directive from Washington lawmakers to seek DOE hydrogen hub funding in [Senate Bill 5910](#). The PNWH2 Hub will focus on zero-carbon, clean H2 production and distribution, H2 technology, manufacturing, and power generation for transportation, agriculture, and commercial end uses. Hub developers have developed several goals for the project with focuses on equity and community and tribal engagement.

The Obsidian Pacific NW Hydrogen Hub

[Obsidian Pacific NW Hydrogen Hub](#) on November 8 [submitted its plan](#) for a hydrogen network powered by renewable electricity to DOE. The hub would be funded with a combination of probate and federal funding and will create a system produce store and transport hydrogen. The hub is predicted to use three anchor sites, each capable of producing 175 metric tons of hydrogen a day.

Trans Permian H2Hub

MSEX Resources Corp. [announced](#) it applied for federal funding on November 7 for a hydrogen hub in the Permian basin. The Trans Permian H2Hub would include hydrogen bus manufacturing, H2 re-fueling stations, green and blue hydrogen production, ammonia and methanol production, solar and wind power, and metropolitan bus transport projects. The hub developers also plan to blend hydrogen with natural gas and convert local railroad's train engines to hydrogen to reduce CO₂ emissions. As part of the process to support the hub, developers plan to create a community benefits program, as well as economic and community development programs.

Other proposed hubs

- [Alliance for Renewable Clean Hydrogen Energy Systems \(ARCHES\)](#)
- [Appalachian Energy Future \(AEF\)](#)
- [Appalachian Regional Clean Hydrogen Hub \(ARCH2\)](#)
- [DMV Hydrogen Greenprint](#)
- [Great Lakes Clean Hydrogen Partnership](#)
- [HALO Hydrogen Hub](#)
- [Hawaii Hydrogen Hub \(limited information\)](#)
- [Heartland Hydrogen Hub](#)
- [HyBuild Los Angeles](#)
- [HyBuild Carolinas](#)
- [HyVelocity Hub](#)
- [Midwestern Hydrogen Coalition](#)
- [New York Hydrogen Hub, led by NYSERDA](#)
- [U. S. Steel, Equinor and Shell hub](#)
- [Southeast Hydrogen Hub](#)
- [Western Inter-State Hydrogen Hub](#)

Decarbonizing Cement and Concrete – an Industrial Innovation Initiative Blog

The production process for cement, the key ingredient in concrete, makes up about [7 to 8 percent](#) of carbon dioxide (CO₂) emissions globally, which amounted to around [2.7 billion metric tons of CO₂ a year as of 2021](#). The cement sector is the world's third-largest CO₂ emitter, and demand for cement and concrete is increasing, largely due to a growing global population and urbanization. This sector is also critical to the global economy and workforce. The cement sector [contributes](#) over 5 percent of global gross domestic product, or GDP, and nearly 8 percent of employment worldwide, making it critical to find ways decarbonize this sector.

Decarbonization solutions, including carbon capture, fuel switching, energy efficiency, and material substitutions, can be applied throughout the cement and concrete production process. Many solutions depend on the specific circumstances of a facility, and a supportive policy landscape will be essential to the widespread deployment of decarbonization technologies.

Read more about **policies that can help decarbonize the cement and concrete industries** in: [Laying the Foundation of Cement and Concrete Decarbonization - Industrial Innovation Initiative](#)

MN Executive Order Directs State Agencies to Pursue Federal Funding for Clean Hydrogen

Minnesota governor Tim Walz signed [executive order 22-22](#) on October 25, directing state agencies to pursue federal funding for clean hydrogen. In the order, Walz remarks on Minnesota's climate goals, emphasizing that clean hydrogen could be critical to reducing the state's emissions, while boosting the state's economy.

The executive order directs state agencies to evaluate the state's regulatory preparedness in anticipation of the development of hydrogen production, distribution, and identify steps needed to scale up existing green hydrogen production to a commercial scale. The order also contains recommendations for community engagement, environmental justice, and workforce concerns that could arise related to hydrogen production and distribution and directed agencies to consult with tribal nations and engage with historically disadvantaged communities, representatives from labor unions, utilities, and research facilities. Agencies were also asked to seek to participate in the development of hydrogen hub applications.

DOE Issues Notice of Intent for New Technology Commercialization Fund Program Funded by Bipartisan Infrastructure Law

The U.S. Department of Energy's (DOE) Office of Technology Transitions, in partnership with the Office of Fossil Energy and Carbon Management [announced](#) its intent to issue a [Technology Commercialization Fund solicitation](#) funded by the Bipartisan Infrastructure Law. The [lab call](#) will ask for proposals to accelerate the commercialization of carbon dioxide removal technologies by advancing measurement, reporting, and verification best practices and capabilities. Awardees will work to identify and address the challenges preventing current and novel carbon dioxide removal solutions from achieving the robust measurement, reporting, and verification required for effective deployment at scale.

News Roundup

- [Carbon Credits Emerge as a Focus at COP27 - The New York Times \(nytimes.com\)](#)
- [Why America's climate law is causing rifts at COP 27 - E&E News \(eenews.net\)](#)
- [Remove carbon—but do it equitably. Carbon removal mustn't become a new frontier for injustice | Fortune](#)
- [NW Natural tees up carbon capture pilot, advances renewable gas initiatives | S&P Global Market Intelligence \(spglobal.com\)](#)
- [Public Comments Requested on Additional Aspects of the IRA Clean Energy Tax Incentives, including Clean Hydrogen Production, Carbon Capture and Sequestration, Clean Commercial Vehicles and EV Charging Stations | Mintz](#)
- [Direct Air Capture Can Save The World Trillions Of Dollars - Lori Guetre, Carbon Engineering \(carbonherald.com\)](#)
- [Offshore CCS Projects Could Breath New Life Into Gulf Of Mexico | Rigzone](#)
- [White House releases net-zero road map - E&E News \(eenews.net\)](#)

- [INTERVIEW: Hydrogen, carbon capture critical to decarbonising the chemical industry - Dow CEO | ICIS](#)
 - [ExxonMobil sees enhanced oil recovery expertise as learning path for climate action | Upstream Online](#)
 - [Delta, other companies struggle to meet sky-high climate pledges - The Washington Post](#)
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Global News

- [New Zealand Energy requests carbon sequestration consents for Taranaki basin licenses | Oil & Gas Journal \(ogj.com\)](#)
 - [Shell, Sinopec partner up in China carbon capture project \(gasworld.com\)](#)
 - [Is Asia ready to embrace carbon capture and storage? | Allen & Overy LLP - JDSupra](#)
 - [Thailand: Toward carbon neutrality - a race we can't afford to lose - Global Compliance News](#)
 - [China Launches First 10-million-ton CCUS Project to Probe into Decarbonization Solutions for Industrial Enterprises in East China \(yahoo.com\)](#)
 - [S. Korea seeks to create massive clean hydrogen ecosystem | Yonhap News Agency \(yna.co.kr\)](#)
 - [Ottawa and Alberta kick in \\$465 million for clean hydrogen facility | Financial Post](#)
 - [Centrica and Equinor partner on green hydrogen hub \(powerengineeringint.com\)](#)
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New podcasts, reports, statements & blogs

- [Controlling liability risks is vital for uptake of carbon capture | Allen & Overy LLP - JDSupra](#)
 - [L.B. Foster and ACIPCO Providing Coated Pipe to Summit \(globenewswire.com\)](#)
 - [NETL Team Visits the Heartland to Advance Next-Generation Carbon Capture Technologies | netl.doe.gov](#)
 - [Spinning Gold From Carbon - CleanTechnica](#)
 - [Evaluation of CO2 Transport Design Via Pipeline in the CCS System with Various Distance Combinations - IOPscience](#)
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News in the States

Alaska

- [Alaska voters say they're worried about climate change. Here's where the candidates stand. - Alaska Public Media](#)
- [Alaska state company proposes hydrogen hub, eyeing federal funds | Reuters](#)

- [Alaska LNG Developer Submits Plans For Hydrogen Hub | TankTerminals](#)

California

- [Creation of a Carbon Capture Regulatory Framework \(SB 905\) – Policies - IEA](#)

Iowa

- [Carbon capture creates new opportunities for ethanol, panelists say | Successful Farming \(agriculture.com\)](#)
- [Would CO2 pipelines be 'life or death' for Iowa's ethanol industry? | The Gazette](#)
- [Summit reaches land deals on more than half of CO2 pipeline route | SDPB](#)
- [Summit CO2 easements hit 50%; critics condemn 'strongarm' tactics \(argusleader.com\)](#)
- [Locally based Big Elk Energy Systems part of \\$4.5B carbon capture/storage project \(tulsaworld.com\)](#)
- [Rally opposing carbon pipelines to be held Wednesday | Daily Democrat | mississippivalleypublishing.com](#)
- [Company with proposed CO2 pipeline in Delaware County sought to limit required safeguards for soil | Tri-state News | telegraphherald.com](#)
- [Summit Carbon Solutions Achieves Major Project-Wide Milestone \(prnewswire.com\)](#)
- [IUB Sets Scheduling Conference for Proposed Summit Carbon CO2 Pipeline | Iowa Utilities Board](#)
- [Trespassing case might test Iowa's pipeline survey law | The Gazette](#)

Louisiana

- [Louisiana positioned to be a leader in carbon capture - BIC Magazine](#)
- [The Pelican State is leading the way in decarbonization and sustainability - BIC Magazine](#)

Minnesota

- [Scope of environmental review an early issue for carbon pipelines in Minnesota - Agweek | #1 source for agriculture news, farming, markets](#)
- [County briefed on pipeline project | News, Sports, Jobs - Fairmont Sentinel](#)
- [Executive order seeks to develop clean hydrogen markets in Minnesota | Business | insightnews.com](#)
- [GOVERNOR WALZ SIGNS EXECUTIVE ORDER TO DEVELOP CLEAN HYDROGEN MARKETS IN MINNESOTA - KROX \(kroxam.com\)](#)
- [MN Executive Order 22-22 Full Text \(mn.gov\)](#)

New Mexico

- [Effort to transform NM coal plant to carbon-capture facility faces huge hurdles - Albuquerque Journal \(abqjournal.com\)](#)
- [How N.M. governor's race may shift coal, CCS - E&E News \(eenews.net\)](#)
- [Keep San Juan power plant shut down | My View | santafenewmexican.com](#)

North Carolina

- [Gas plants without the emissions? This startup says... | Canary Media](#)

North Dakota

- [Letter: Glad to participate with CO2 pipeline \(bismarcktribune.com\)](#)

- [PSC chair recuses herself from Summit pipeline decisions \(bismarcktribune.com\)](#)
- [Industry Discuss North Dakota's Energy Situation | News Dakota](#)
- [GUEST COLUMN: Texas must do more on carbon capture \(beaumontenterprise.com\)](#)

Pennsylvania

- [Wolf signs state tax credit bill setting out millions for hydrogen hub, other facilities - Pittsburgh Business Times \(bizjournals.com\)](#)

South Dakota

- [Summit Carbon Solutions and South Dakota farmer sue 2 counties - Agweek | #1 source for agriculture news, farming, markets](#)
- [To stay competitive, SD ethanol needs a carbon dioxide pipeline, Summit says \(thepublicopinion.com\)](#)

Texas

- [Zero-emission power plant to be built in Texas - Marketplace](#)
- [NET Power To Build First Utility-Scale Plant With CO2 Sequestration - Carbon Herald](#)
- [GUEST COLUMN: Texas must do more on carbon capture \(beaumontenterprise.com\)](#)
- [CE working on technological improvements in Squamish - Squamish Chief](#)
- [E&E News | Article | Occidental hikes cost of CO2-removal plant to \\$1.1B \(politicopro.com\)](#)
- [MMX seeks Permian hydrogen hub funding \(pemedianetwork.com\)](#)
- [MMEX Resources Corp and Trans Permian H2Hub, LLC Announce Regional H2Hub - Hydrogen Central \(hydrogen-central.com\)](#)

Wyoming

- [Gordon, Seeking Reelection, Points to Wyoming Improvements \(usnews.com\)](#)

Upcoming events

November 15

- [Columbia | SIPA Center on Global Energy Policy | An Equitable Energy Transition and Considerations for Planning](#)

The Center on Global Energy Policy will host Dr. Destenie Nock, Visiting Faculty member at CGEP and Assistant Professor of Engineering and Public Policy and Assistant Professor of Civil and Environmental Engineering at Carnegie Mellon University, for a fireside chat focused on themes related to energy poverty and sustainability including methods to leverage data to reach an equitable and just energy future. In her research and her startup company Peoples Energy Analytics, Dr. Nock has pioneered energy poverty and sustainability metrics in the electricity system.

November 17

- [\[Webinar\] Carbon Capture Gets a Long Runway for Development - November 17th, 12:30 pm - 1:00 pm ET | McDermott Will & Emery - JDSupra](#)

A panel of CCUS industry operators, investors and advisors will dive into the current CCUS market, with a discussion that includes the following: 1) Potential benefits for CCUS under the IRA and how they might play out in future CCUS development projects. 2) The state of the CCUS market prior to the passage of the IRA and how things have progressed since. 3) The role of financing in CCUS projects and how CCUS financing may change going forward after the IRA. 4) What the future of a more developed CCUS industry in the United States would look like and what needs to happen in order to get there.

December 1

- [FECM Save the date Carbon Management Day Webinar 12 PM ET](#)

During the webinar, FECM will discuss updates on key initiatives, take a closer look into FECM-funded carbon management projects, and inform stakeholders on how to get involved. Agenda, presenters, and registration date will be shared at a later date.

December 8

- [Urbana Campus Research Calendar \(OVCRI\): Carbon Capture and Storage \(CCS\) in a Climate Mitigation Portfolio \(illinois.edu\)](#)

This presentation focuses on the role for carbon capture and storage (CCS) in a portfolio of mitigation options as a basis for strategies to advance the CCS option. Using examples from different projects that employ the MIT Economic Projection and Policy Analysis (EPPA) model, we will examine different long-term scenarios to explore the importance of factors influencing advanced technology deployment, including CCS on power generation, cement, iron and steel in different parts of the world. Pathways for decarbonization of global and regional economies will be assessed.

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](#).