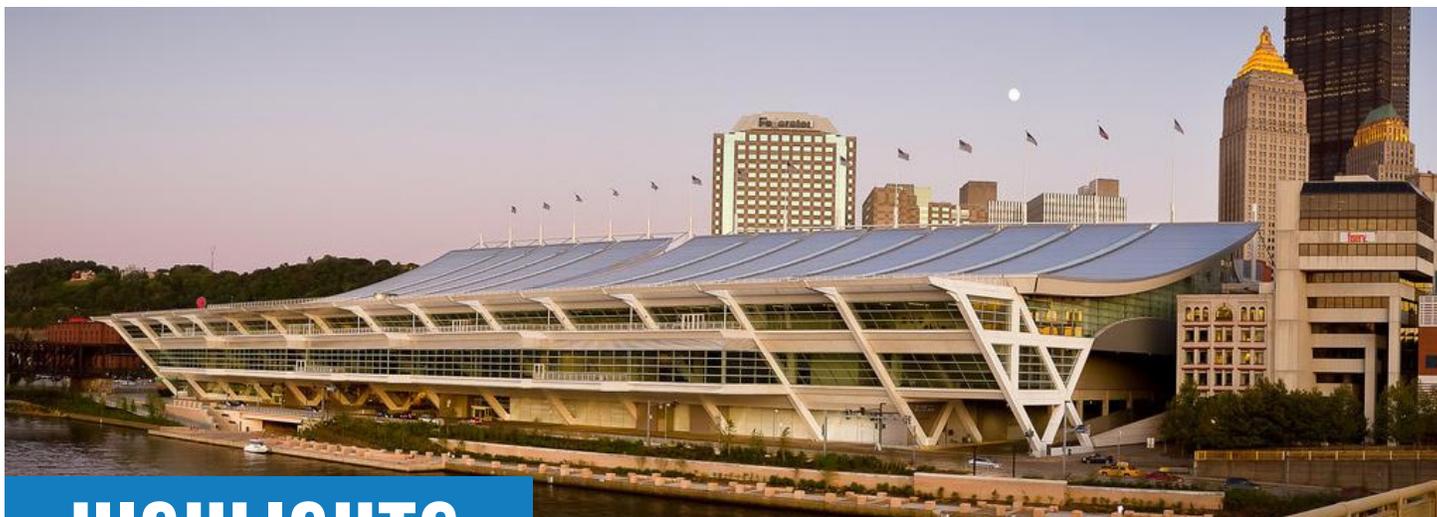


JUNE 2023

CARBON CAPTURE NEWSLETTER



HIGHLIGHTS

The newsletter is compiled by the National Energy Technology Laboratory to provide information on recent activities and publications related to carbon capture.

To subscribe, [click here](#).

2023 FECM/NETL Carbon Management Research Project Review Meeting

The U.S. Department of Energy's (DOE) Office of Fossil Energy and Carbon Management (FECM) National Energy Technology Laboratory (NETL) Carbon Management Research Project Review Meeting, to be held Aug. 28–Sept. 1, 2023, in Pittsburgh, Pennsylvania, will provide attendees with a chance to share in the knowledge and insights gained by more than 150 DOE-sponsored research and development (R&D) projects from the following FECM R&D programs: Point Source Carbon Capture (PSCC), Carbon Dioxide Removal (CDR), Carbon Conversion, and Carbon Transport and Storage. A mixture of plenary, multi-topic breakout, and interactive poster sessions will be used to share research results and provide opportunities for discussion and collaboration on the subject research efforts, both domestic and international. In addition to the project researchers, participants may include employees of other government agencies, electric utilities, research organizations, and industry. For more information and registration see NETL's [events](#) website. The meeting will be co-located with the United States Energy Association's inaugural Carbon Management Technology Showcase (CMTS). Note that registration for the CMTS is separate from the registration for the 2023 FECM/NETL Carbon Management Research Project Review Meeting. For pricing and/or to reserve a booth or table, see the [CMTS webpage](#).

Interagency News and Updates

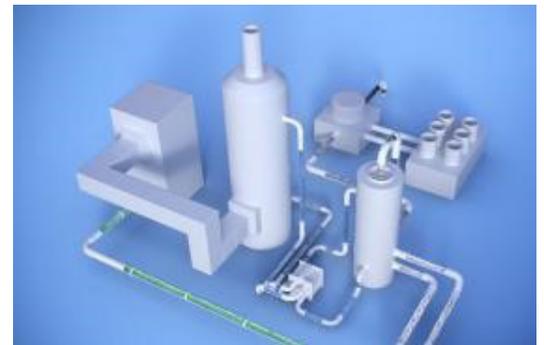
DOE Announces Funding For Carbon Capture, Transport and Storage to Reduce Carbon Pollution

DOE/FECM is reopening FOA-0002164 for Round 3 of funding, up to \$45 million, for the development of lower cost, highly efficient technologies for PSCC from fossil-fuel power plants and industrial point sources capturing CO₂. This includes areas of interest in engineering-scale testing of transformational carbon capture technologies for industrial plants and natural gas combined cycle (NGCC) power plants, and front-end engineering design studies for carbon capture systems at existing (retrofit) domestic NGCC power plants.



NETL to Co-Host Seventh IEAGHG Post-Combustion Capture Conference

NETL and DOE will co-host the International Energy Agency Greenhouse Gas R&D Program's (IEAGHG) Seventh Post-Combustion Capture Conference (PCCC-7), to be held Sept. 25–28, 2023, in Pittsburgh, Pennsylvania. Each PCCC event, which brings together post-combustion capture experts to share knowledge, findings, and expertise, is dedicated to sharing and publicizing progress on all aspects of the technology—from innovative research to demonstration and beyond; from new and improved solvents to novel separation technologies; from technology cost to environmental impact. PCCC-7 will cover various issues related to the status and development of post-combustion capture technologies, including opportunities for technology providers and developers to share their experiences and knowledge.



DOE Announces Selections for Carbon Capture Front-End Engineering Design Studies

DOE's Office of Clean Energy Demonstrations (OCED) selected eight integrated front-end engineering design (FEED) studies for award negotiations to support the development of community-informed integrated carbon capture, transport, and storage systems. These [eight FEED studies](#), representing five different U.S. states and one tribal nation, will address the design of integrated carbon capture and storage (CCS) projects and support the buildout of CCS capacity toward achieving a clean and equitable energy economy. The FEED studies are funded through OCED's Carbon Capture Demonstration Projects Program, which seeks to address the urgent need to deploy carbon management technologies. The goal of the [Carbon Capture Demonstration Projects Program](#) is to accelerate the implementation of integrated CCS technologies and catalyze significant follow-on investments from the private sector to mitigate carbon emissions sources in industries across the United States.

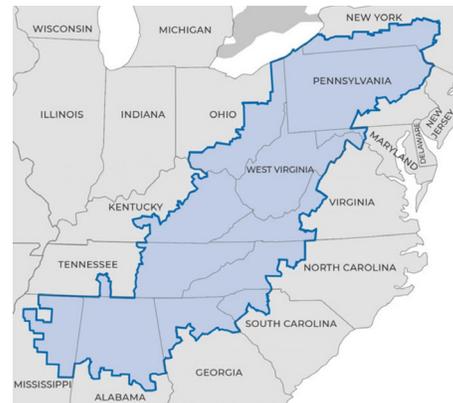


Office of Clean Energy Demonstrations

Interagency News and Updates (continued)

NETL Study Assesses Appalachian Region's Potential to Develop a Hydrogen Economy

NETL's report, "[Appalachian Hydrogen Infrastructure Analysis](#)," studied how development of a hydrogen industry in Appalachia offers a path to sustainable long-term growth. Development of Appalachian hydrogen infrastructure will help create new clean energy jobs, revitalize distressed communities, advance environmental justice, and help achieve the Biden-Harris administration's goal of net-zero carbon emissions in the electricity sector by 2035.



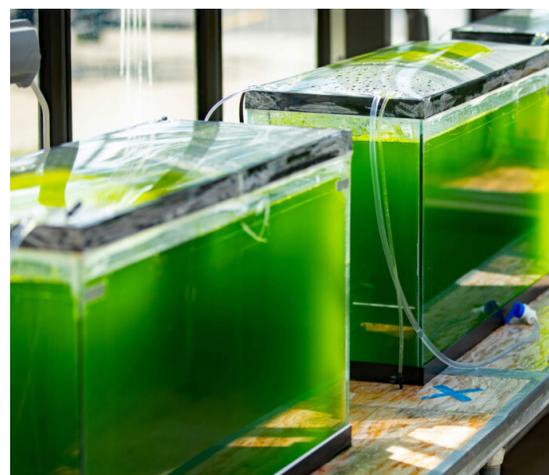
NETL CCUS Research Explained at National Event

A team of NETL researchers, led by environmental sustainability expert Mark McKoy, participated in the [Carbon, Capture, Utilization, and Storage \(CCUS\) conference](#) (Apr. 25–27, 2023) at the University of Houston in Texas. McKoy and a team of experts addressed the laboratory's key research on PSCC, CDR, carbon dioxide (CO₂) conversion into products, reliable CO₂ storage, blue hydrogen production, and critical mineral production from industrial and mining waste. The event brought together key decisionmakers and researchers from the American Association of Petroleum Geologists, the Society of Petroleum Engineers, and the Society of Exploration Geophysicists. The work presented at the event demonstrated the ongoing need for skilled petroleum geologists, geophysicists, and engineers to help define the future of carbon management.



NCCC Completes First Algae Conversion Tests

The National Carbon Capture Center (NCCC) completed tests with Helios-NRG LLC that demonstrate a novel, multi-stage continuous (MSC) algae-based system to capture CO₂ from power plant flue gas. It was the first algae conversion technology test campaign ever conducted at the facility. The center tested only the MSC portion of the Helios-NRG technology. Field test results exceeded the project goals of 80% CO₂ efficiency and productivity of 25 grams per square meter per day, indicating promise for the future development and scale-up of the system. The high productivity coupled with conversion of algae to value-added products can create a revenue stream, reducing the net cost of capture significantly. Helios-NRG will further quantify these results through techno-economic analysis (TEA) that will be reported at the conclusion of the project later in 2023.



Algal Reactors, Photo Credit: Douglas Levere

Interagency News and Updates (continued)

IRA Invests in Infrastructure Improvements at NETL

FECM announced \$150 million in funding provided through the Inflation Reduction Act (IRA) to support site-wide infrastructure and laboratory modernization upgrades at NETL facilities. NETL leads R&D, working to drive innovation and deliver solutions in support of programs that help to decarbonize power generation and industrial production, remove CO₂ from the atmosphere, and mitigate the environmental impacts of fossil fuel production and use. This lab modernization effort will help enhance NETL's capabilities and competitiveness in developing technologies to



address climate change and advance a clean energy and industrial economy. The IRA investment will be used to enhance core strengths at NETL's three complexes (Pittsburgh, Pennsylvania; Morgantown, West Virginia; and Albany, Oregon), including alloy development; computation, data, and visualization; and process development.

FECM's Role in Call to Action on Carbon Management

FECM is playing a major role in President Biden's Carbon Management Challenge by investing more than \$12 billion allocated by the BIL toward the research, development, and commercial demonstration of carbon capture, direct air capture (DAC), and carbon conversion technologies, as well as the buildout of carbon transport and storage infrastructure at multiple sites in multiple regions around the country. Other countries (i.e., Denmark, the Netherlands, Norway, and the United Kingdom) are making proportional commitments, but the need to deploy carbon management solutions requires even more ambitious commitments from even more countries.

FECM Highlights Partnerships and R&D at CERAWEEK 2023

FECM attended CERAWEEK, an annual conference that brings global energy industry leaders, experts, government officials, and policymakers together to advance new ideas and solutions to the biggest challenges



facing the future of energy, the environment, and the climate. FECM's Assistant Secretary Brad Crabtree, along with Deputy Assistant Secretary for the Office of Resource Sustainability Ryan Peay and Deputy Assistant Secretary for the Office of Carbon Management Noah Deich, participated in multiple panels and meetings to discuss how FECM is helping to advance a clean energy and industrial economy. During CERAWEEK, Assistant Secretary Crabtree partook in meetings with government, industry, and stakeholders to discuss the advancement of domestic and global partnerships to meet current energy and climate goals.

Funding Notice: BIL: Carbon Capture Large-Scale Pilot Projects

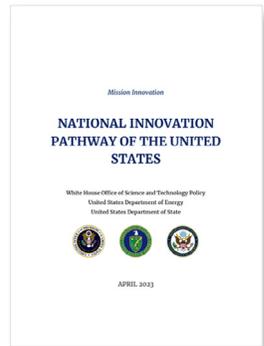
DOE's OCED, in collaboration with FECM, announced up to \$820 million in funding for up to 10 projects focused on de-risking transformational carbon capture technologies and catalyzing significant follow-on investments for commercial-scale demonstrations on carbon emissions sources across the power and industrial sectors. Funding (provided by the Bipartisan Infrastructure Law [BIL]) for this program will provide the support needed to test these novel technologies under relevant conditions in both the power and industrial sectors. This funding opportunity announcement (FOA) has two topic areas: Carbon Capture Large-Scale Pilot Projects at Industrial Facilities Not Purposed for Electric Generation, and Carbon Capture Large-Scale Pilot Projects at Coal or Natural Gas Electric Generation Facilities. Download the [full FOA](#) for more information on eligibility.

President Biden Sets 2030 GHG Pollution Reduction Target

President Biden announced a new target for the United States to achieve a 50–52% reduction from 2005 levels in economy-wide net greenhouse gas (GHG) pollution in 2030. President Biden rejoined the Paris Agreement and set a course for the United States to tackle the climate crisis at home and abroad, reaching net-zero emissions economy-wide by no later than 2050. As part of re-entering the Paris Agreement, he also launched a whole-of-government process, organized through the National Climate Task Force, to establish this new 2030 emissions target.

President Biden to Catalyze Global Climate Action Through the Major Economies Forum on Energy and Climate

President Biden convened with leaders of the Major Economies Forum on Energy and Climate (MEF), where he highlighted new steps the United States is taking to meet its goal of reducing emissions 50–52% in 2030. The president was joined by other leaders in new efforts aimed at accelerating progress in four key areas necessary for keeping a 1.5 °C limit on warming within reach, specifically decarbonizing energy; ending deforestation of the Amazon and other critical forests; tackling potent, non-CO₂ climate pollutants; and advancing carbon management. To help frame the MEF discussion, leaders were briefed by Dr. Fatih Birol, Executive Director of IEA, on a [new report](#) to the MEF highlighting why action in these areas between now and 2030 is critical to preserve credible pathways to limit warming to 1.5 °C by 2100. The United States released a new [National Innovation Pathway Report](#), highlighting the Biden-Harris administration's all-hands-on-deck strategy for accelerating key clean energy technology innovations.



CDR

FECM is advancing a suite of CDR approaches to help the nation achieve net-zero GHG emissions by 2050 and support an equitable, decarbonized energy system of the future. An FECM fact sheet describes how CDR is needed to counterbalance emissions associated with the hardest-to-decarbonize sectors to achieve net-zero goals, and will ultimately remove legacy CO₂ emissions from the atmosphere.



The IRA and Carbon Management Opportunities in Western Tribal Nations

As a major energy-producing state, Alaska's communities, workforce, and industries have the opportunity to benefit from enhancements to the 45Q credit and other provisions in the IRA. An FECM fact sheet highlights the facilities in Alaska that could potentially qualify for the 45Q tax credit, which can be used for carbon capture, carbon conversion, and DAC projects.

The IRA and Carbon Management Opportunities in Alaska

As a major energy-producing state, Alaska's communities, workforce, and industries have the opportunity to benefit from enhancements to the 45Q credit and other provisions in the IRA. An FECM fact sheet highlights the facilities in Alaska that could potentially qualify for the 45Q tax credit, which can be used for carbon capture, carbon conversion and DAC projects.

Interagency News and Updates (continued)

How TEAs Pave the Way to a Low-Carbon Future

Scientists at DOE's Lawrence Berkeley National Laboratory are using techno-economic analysis (TEA), a data-driven way to predict the best routes to decarbonization, to answer questions such as: Which of the emerging technologies for reducing carbon emissions will be most effective, and where? What about costs? What kinds of investments will have the most impact? TEA uses computer models to evaluate the cost implications and potential environmental impacts of emerging technologies. These models can build on initial research results for a technology and calculate the costs of scaling it up. This type of predictive analysis can be used to support decision-making by researchers, industry stakeholders, regulators and policy-makers. A combination of robust computing power and more sophisticated techniques have made TEA an increasingly powerful approach. The research often requires a blend of engineering design, process design and simulation, cash flow analysis, life cycle assessment, and geospatial analysis.

DAC Pre-Commercial EPIC Prize

The DAC Pre-Commercial Energy Program for Innovation Clusters (EPIC) Prize awards up to \$3.7 million in cash prizes to incubator teams that submit creative and impactful plans to support entrepreneurs and innovators in the DAC space and create meaningful community engagement. It aims to support both emerging and established DAC incubators and accelerators in implementing those plans to develop strong clusters, resources, and connections for energy startups and entrepreneurs. The deadline to [apply](#) for the first phase is June 22, 2023.



DAC Pre-Commercial Technology Prize

The DAC Pre-Commercial Technology Prize awards up to \$3.2 million in cash prizes and \$800,000 in technical assistance vouchers to teams that identify a critical need in the DAC industry, develop a solution to address this gap, and test the idea to a degree of scale. It focuses on the steps of ideation and entrepreneurship needed to prepare technologies and businesses for commercialization. The deadline to [apply](#) for the first phase is Sept. 29, 2023.



IEA CCUS Explorer

The IEA established the CCUS Explorer data set as part of its efforts to track advances in CCUS. It covers all CO₂ capture, transport, storage, and utilization projects worldwide that have been commissioned since the 1970s, and have an announced capacity of more than 100,000 metric tons per year (or 1,000 metric tons per year for DAC facilities). It includes projects with a clear emissions reduction scope, and excludes CO₂ capture for utilization pathways that bring low climate benefits (e.g., food and beverages) or that are part of the conventional industrial process (e.g., internal use for urea production), as well as use of naturally occurring CO₂ for enhanced oil recovery. The database complements other technology-related tracking efforts, such as the [Hydrogen Projects Database](#) and the [Clean Energy Demonstration Projects Database](#).

Interagency News and Updates (continued)

FECM's Engagement Home Page

FECM fosters and leverages connections with international and domestic partners; collaborates within DOE and the broader U.S. government; supports community, tribal, and stakeholder engagement; and encourages public-private partnerships to assist in meeting the Biden-Harris administration's climate goals. FECM's Engagement page includes links to upcoming events, news and blogs, and other resources.

CDR Interactive Project Map

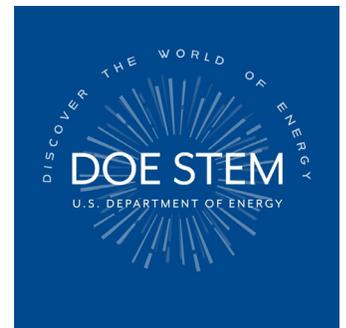
The CDR interactive project map contains information for active and inactive projects managed under NETL's PSCC Program and CDR Program. The map data can be filtered to view specific information related to projects with certain criteria, such as the PSCC approach, technology, ending scale, application type, and key technology.



CARBON CAPTURE Interactive Project Map

DOE STEM Portal

DOE is building pathways for a diverse workforce to pursue science, technology, engineering and mathematics (STEM) careers. DOE seeks to engage learners at all levels to promote STEM and energy literacy and to attract, inspire, and develop a STEM identity and a sense of belonging in STEM. DOE is committed to promoting and supporting people from all backgrounds and perspectives, including individuals and communities that have been historically underrepresented in STEM fields and activities at DOE.



Career Opportunities at NETL

At the core of NETL's success is its commitment to hiring the right people for the right positions. DOE's only government-owned and government-operated national laboratory offers exciting federal careers in research and engineering, technical project management, procurement, finance and budget, legal, and administrative support. Learn more at [NETL Careers](#).

Bipartisan Infrastructure Law Hub

The BIL represents the most dramatic changes to DOE since its founding in 1977. In the next few years, the BIL will stand up 60 new DOE programs, including 16 demonstration and 32 deployment programs, and expand funding for 12 existing research, development, demonstration, and deployment programs. NETL's [BIL Hub](#) provides information on the BIL, including links to the Guidebook, DOE's Clean Energy Corps, DOE's Applicant Portal, and DOE's Grid Resilience Program, as well as information on solicitations and funding opportunities.



U.S. and International Events

2023 IEW

The 41st edition of the International Energy Workshop (IEW), to be held in Golden, Colorado, June 13–15, 2023, will be co-hosted by the Colorado School of Mines and the National Renewable Energy Laboratory. Researchers and practitioners from countries around the world are invited to submit original papers with new and innovative results on scientific, technical, and practical experience on the economics of energy and climate systems.



TCCS-12

The bi-annual Trondheim CCS Conference series is a leading scientific CCS technology conference. Since its inception in 2003, the conference is a meeting place for more than 400 CCS experts. The conference typically has 150 oral presentations, five or six parallel sessions, more than 100 posters, and world-leading keynote speakers. The 12th conference (TCCS-12), to be held June 19–21, 2023, in Trondheim, Norway, will build on the heritage of the previous conferences.



Carbon Capture Summit 2023

The key focus for the Carbon Capture Summit 2023, to be held June 26–27, 2023, in Amsterdam, the Netherlands, will be working in collaboration with industry by sharing expertise, building capacity, and providing advice and support so CCUS can play an integral role in reducing carbon emissions. Government agencies, global corporations, research bodies, and non-government organizations (NGOs) committed to learning and adopting CCUS technologies will participate in the event.

Carbon Capture Technology Expo

The Carbon Capture Technology Expo, to be held June 28–29, 2023, in Houston, Texas, will bring together leading engineering firms, technology manufacturers and suppliers, energy firms, the oil and gas sector, heavy industry, chemical companies, various manufacturing organizations, research groups and NGOs, consultants, and government bodies to explore how to rapidly accelerate the deployment and commercialization of CDR technologies as a key solution on the pathway to net-zero carbon emissions.

Hydrogen Technology Conference & Expo

The Hydrogen Technology Conference & Expo, to be held June 28–29, 2023, in Houston, Texas, is dedicated to discussing advanced technologies for the hydrogen and fuel cell industry. The event brings together the entire hydrogen value chain to focus on developing solutions and innovations for low-carbon hydrogen production, efficient storage and distribution, and applications in a variety of stationary and mobile applications.

U.S. and International Events (continued)

CEM14

As a parallel event to the G20 Energy Transition Working Group meeting to be held July 22, 2023, in Goa, India, the 14th Clean Energy Ministerial (CEM14) is scheduled for July 21, 2023. The CEM is a high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. Initiatives are based on areas of common interest among participating governments and other stakeholders.

Clearwater Clean Energy Conference

The 47th Clearwater Clean Energy Conference, to be held July 23–28, 2023, in Clearwater, Florida, provides essential information to power generators who must meet the challenges of energy utilization in the 21st century. The conference will include more than 200 technical presentations in four days, all offered both in-person and virtually.

FECM/NETL Carbon Management Research Project Review Meeting

The FECM/NETL 2023 Carbon Management Project Review Meeting will be held Aug. 28–Sept. 1, 2023, in Pittsburgh, Pennsylvania. This meeting will share knowledge and insights from the following FECM R&D programs: PSCC, CDR, Carbon Conversion, and Carbon Transport and Storage. A mixture of plenary, multi-topic breakout, and interactive poster sessions will be used to share research results and provide opportunities for discussion and collaboration on the subject research efforts, both domestic and international.



**2023 FECM / NETL
Carbon Management
Research Project Review Meeting**

USEA's Carbon Management Technology Showcase

The United States Energy Association's (USEA) inaugural CMTS will be co-located with the FECM/NETL 2023 Carbon Management Project Review Meeting. It will be held Aug. 28–30, 2023, in Pittsburgh, Pennsylvania, and will showcase the latest technology developments in PSCC, CDR, carbon conversion, and carbon transport and storage. Note that registration for the CMTS is separate from the registration for the 2023 FECM/NETL Carbon Management Research Project Review Meeting. For pricing information of CMTS and to reserve a booth or table, [see website](#).



CARBON MANAGEMENT TECHNOLOGY SHOWCASE



PCCC-7

The IEAGHG PCCC-7 will be in person, Sept. 25–28, 2023, in Pittsburgh, Pennsylvania. The conference format will consist of a two-stream program for oral presentations, a poster session, and a small exhibition area. NETL and DOE will co-host PCCC-7, bringing together post-combustion capture experts to share knowledge, findings, and expertise.

U.S. and International Events (continued)

Pittsburgh Coal Conference

The 2023 International Pittsburgh Coal Conference, to be held in Istanbul, Turkey, Oct. 4–6, 2023, is an outgrowth of a series of conferences spanning more than three decades, dealing with coal utilization, both in the United States and internationally. The conference is dedicated to providing a unique opportunity for in-depth and focused exchange of technical information and policy issues among representatives from industry, government and academia throughout the world.



**INTERNATIONAL PITTSBURGH
COAL CONFERENCE**
University of Pittsburgh · Swanson School of Engineering

Business and Industry News

Carbon-Capture Technology Could Benefit from Quantum Computing

A team at NETL and the University of Kentucky used a supercomputer to simulate the quantum calculations needed to study chemical reactions related to carbon capture. Designing optimal reaction pathways requires



AVS Quantum Science
co-published with AIP Publishing

a detailed understanding of the microscopic quantum properties of the molecules involved. This is a challenge because precise calculations of the quantum nature of chemical reactions are notoriously difficult to do on conventional computers. The required computational resources increase exponentially with the number of atoms involved, making simulating even simple reactions very difficult. Fortunately, this exponential scaling does not occur if the calculations are done on quantum computers. The team is now collaborating with IBM quantum to implement their ideas on an existing quantum computer, and are hopeful they may demonstrate a quantum advantage. They reported [their findings](#) in AVS Quantum Science.

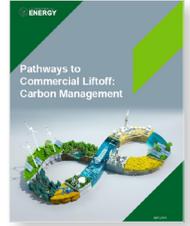
CDR Collaboration with Academia

There are less than two dozen DAC facilities in operation worldwide, but that could sharply increase when DOE awards \$3.5 billion to help build DAC hubs in the United States. At least 10 research universities from around the country are seeking DAC hub funding, according to interviews and public announcements. Some institutions—such as Cornell University and the University of Wyoming—hope to lead regional or statewide feasibility studies of certain DAC technologies. Others aim to help with specific projects, such as one DAC hub that Shell is pursuing with Louisiana State University and the University of Houston. Other schools—led by the University of California, Berkeley—want to research alternative business models for DAC hubs. The University of Illinois' Prairie Research Institute, along with NETL and other commercial partners, is evaluating the feasibility of deploying Climeworks' technology in several areas with different regional climates and geologic formations. The coalition is looking at test sites in Louisiana, Wyoming, and Southern California near the Salton Sea. That study was partially funded by a separate DOE program in 2022. For the DAC hub competition, Climeworks' collaborated on a regional feasibility study application with the University of North Dakota's Energy and Environmental Research Center.

Publications

Pathways to Commercial Liftoff: Carbon Management

DOE, APRIL 2023.



A tool for measuring the system cost of replacement energy

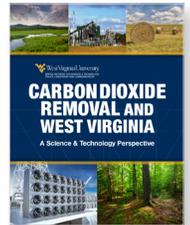
AMANDA HARKER STEELE, SMRITI SHARMA, IVONNE PENA CABRA, LUKE CLAHANE, ARUN IYENGAR, ENERGY, VOLUME 275, JULY 15, 2023.

Incorporation of market signals for the optimal design of post combustion carbon capture systems

RADHAKRISHNA TUMBALAM GOOTY, JAFFER GHOUSE, QUANG MINH LE, BHURISA THITAKAMOL, SABEREH REZAEI, DENIS OBIANG, RAGHUBIR GUPTA, JAMES ZHOU, DEBANGSU BHATTACHARYYA, DAVID C. MILLER, APPLIED ENERGY, VOLUME 337, MAY 1, 2023.

Carbon Dioxide Removal and West Virginia: A Science & Technology Perspective

WEST VIRGINIA UNIVERSITY'S BRIDGE INITIATIVE FOR SCIENCE AND TECHNOLOGY POLICY, LEADERSHIP, AND COMMUNICATIONS, 2023.

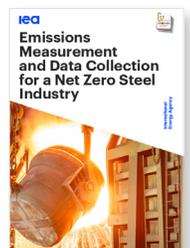


Pilot Test of a Nanoporous, Super-hydrophobic Membrane Contactor Process for Post combustion CO₂ Capture

SHIGUANG LI, HOWARD MEYER, TRAVIS PYRZYNSKI, ED SANDERS, UTTAM SHANBHAG, NCCC AND DOE/NETL, OCTOBER 6, 2022.

Emissions Measurement and Data Collection for a Net Zero Steel Industry

IEA, APRIL 2023.



About DOE Carbon Capture:

DOE/NETL is developing the next generation of advanced CO₂ capture technologies through NETL's Point Source Carbon Capture Program (PSCC) and advancing a diverse set of CDR approaches to directly remove CO₂ emissions from the atmosphere through NETL's Carbon Dioxide Removal Program.



The Digital Compendium of Carbon Capture Technology provides a technical summary of the DOE/NETL's Carbon Capture Program, assembling carbon dioxide capture technology research and development (R&D) descriptions in a searchable database.



Carbon Capture Reference Materials

- Carbon Dioxide Removal Program Fact Sheet
- Carbon Capture Infographics
- Interactive Project Maps: PSCC and CDR
- Compendium of Carbon Capture Technology
- Carbon Dioxide Capture Handbook
- CCSI²
- Systems Analysis
- Conference Proceedings
- Accomplishments Posters: PSCC and CDR

Contact Us

DOE Carbon Capture contacts:

Ron Munson, Point Source Capture Technology Manager, 412.386.9294

Andrew Jones, Carbon Dioxide Removal Technology Manager, 412.386.5531

Amishi Claros, Acting Director, CO₂ Removal and Conversion, 202.586.1888

Dan Hancu, DOE Senior Program Manager, Point Source Carbon Capture, 240.220.1186

1450 Queen Avenue SW
Albany, OR 97321-2198
541-967-5892

3610 Collins Ferry Road
Morgantown, WV 26507-0880
304-285-4764

626 Cochran Mill Road
Pittsburgh, PA 15236-0940
412-386-4687

Program staff are also located in **Houston, Texas** and **Anchorage, Alaska**

CUSTOMER SERVICE: 1-800-553-7681

www.netl.doe.gov

[Click here to subscribe or unsubscribe to the CCN.](#)

[Click here to submit questions, feedback or SUGGESTIONS.](#)

Get Social with Us

There are several ways to join the conversation and connect with NETL's Carbon Capture activities:

Disclaimer

This project was funded by the United States Department of Energy, National Energy Technology Laboratory, in part, through a site support contract. Neither the United States Government nor any agency thereof, nor any of their employees, nor the support contractor, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.