

CARBON STORAGE NEWSLETTER

C S N

VOL. 21, NO. 7

This newsletter is compiled by the National Energy Technology Laboratory to provide information on recent activities and publications related to carbon storage. It covers domestic, international, public sector, and private sector news in the following areas:

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DOE/NETL HIGHLIGHTS

DOE-Sponsored, Battelle-Led CCUS Partnership Completed.

The final reports for the Midwest Regional Carbon Sequestration Partnership (MRCSP) have been completed and approved by the U.S. Department of Energy (DOE), *marking the completion of the MRCSP Program* after 17 years of carbon capture, utilization, and storage (CCUS) research and development (R&D). MRCSP's work was funded mainly by DOE's Office of Fossil Energy and Carbon Management (FECM). Battelle led the MRCSP in phases, starting with the Characterization Phase in 2003, moving to multiple small-scale pilot tests in the Validation Phase in 2005, and culminating in the large-scale Development Phase in 2008. The focus now shifts to commercialization of CCUS, with Battelle continuing its leadership role, jointly with the Illinois State Geological Survey, of the *Midwest Regional Carbon Initiative (MRCI)*. From *DOE's Office of Fossil Energy and Carbon Management*. June 2021.



DOE Announces Funding for DAC Technology.

DOE announced federal funding for six R&D projects that advance direct air capture (DAC) technology—a carbon dioxide (CO₂) removal approach that extracts CO₂ from the atmosphere. One of the selected projects will develop preliminary designs for large-scale DAC and work with partners on the designs to permanently store CO₂ in underground facilities in Wyoming, Louisiana, and California. The projects will be managed by DOE's FECM and the National Energy Technology Laboratory (NETL). From *DOE's Office of Fossil Energy and Carbon Management*. June 2021.

ANNOUNCEMENTS

2021 DOE/NETL Carbon Management and Oil and Gas Research Project Review Meeting Agenda Available.

The DOE/NETL *2021 Carbon Management and Oil and Gas Research Project Review Meeting* will be held in August 2021 through a series of virtual meetings. The project review meeting allows researchers to present results from more than 250 projects funded through a variety of program areas, including Carbon Storage and Utilization.

DOE Leads International Forum to Develop Net-Zero Emissions Strategies.

DOE is leading the creation of a new international forum dedicated to developing long-term strategies, such as carbon capture and storage (CCS), to reach global net-zero emissions. The Net-Zero Producers Forum includes Canada, Norway, Qatar, Saudi Arabia, and the United States, which collectively represent 40% of global oil and gas production. DOE, along with other governments, also *announced several other initiatives* to expand international cooperation in addressing potential climate issues and enhance clean energy innovation.

NETL-Supported Paper Published as "Feature Paper."

An NETL-supported paper evaluating the influences that market and policy changes could have on the economics of CCS facilities was published as a "Feature Paper" in a *Special Issue of Alternative Energy Policy*. The paper, titled "*Comparative Analysis of Carbon Capture and Storage Finance Gaps and the Social Cost of Carbon*," used data provided from modified versions of models and resources created and managed by NETL.

FECM Chief of Staff Participates in CCS Webinar.

FECM Chief of Staff Shuchi Talati provided *opening remarks* at the final installment of a three-part Global CCS Institute webinar, discussing DOE's role in implementing CCS technologies to meet the Administration's emissions targets. *The Carbon Capture and Storage 101 Webinars: CCS Policy for a Net-Zero Future* focused on global CCS policies.



ANNOUNCEMENTS *(cont.)*

NETL Director Delivers Keynote Address at Carbon Forum.



NETL Director Brian Anderson delivered the keynote address at “The Value of Carbon and Coal in West Virginia’s Energy Future” virtual forum. U.S. Secretary of Energy Jennifer Granholm also spoke at the virtual forum, highlighting the importance of CCUS and CO₂ removal technologies. The virtual forum discussed West Virginia’s role in reducing the nation’s CO₂ emissions.

DOE Funds Carbon-Based Building Materials.

DOE’s FECM announced the selection of three projects to receive federal funding for cost-shared R&D to explore carbon-based building materials. The selected projects will investigate opportunities to develop construction materials that offer lower life cycle CO₂ emissions and other improved properties.

U.S. Launches Decarbonization Initiative.

U.S. Secretary of Energy Jennifer Granholm launched the G7 Industrial Decarbonization Agenda (IDA) Initiative to address potential climate change and reduce greenhouse gas (GHG) emissions from heavy industry. IDA challenges G7 members to leverage their innovation to develop robust, durable, and impactful common approaches to net-zero outcomes while spurring clean market growth.



USDA Initiative to Quantify CCS Evaluation Tools.



The U.S. Department of Agriculture (USDA) announced an initiative to quantify the climate benefits of Conservation Reserve Program contracts to improve existing models and tools (e.g., *COMET-Farm* and *COMET-Planner*). These tools enable producers to evaluate potential carbon storage and GHG emissions reductions based on specific management scenarios.

PROJECT and BUSINESS DEVELOPMENTS

Company Launches CCS Project.

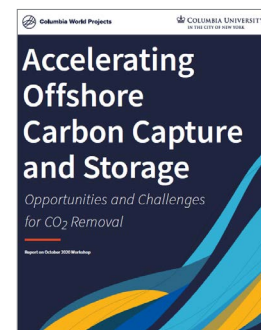
Pending regulatory approvals, Venture Global LNG plans to launch a CCS project at its Calcasieu Pass and Plaquemines liquid natural gas (LNG) facilities, located in the southwestern and southeastern corners of Louisiana, respectively. In addition to capturing and storing approximately 500,000 tons of CO₂ per year from both sites, the company also plans to use similar infrastructure to capture and store an additional 500,000 tons of CO₂ from the CP2 facility (once permitted) located in Cameron Parish, Louisiana. From *Renewable Energy Magazine*. May 2021.

CCS Joint Venture Formed.

Talos Energy and Storegga Geotechnologies agreed to jointly assess and develop CCS opportunities on the U.S. Gulf Coast and in the Gulf of Mexico. The two companies will also explore cooperation with others across the CCS value chain. Under the joint venture framework, the companies plan to originate and mature CCS ventures, combining Talos’ offshore operations and subsurface experience with Storegga’s CCS project experience. From *Offshore Magazine*. June 2021.

Offshore CCS Report Released.

Columbia World Projects (CWP) released a report identifying key opportunities and challenges in offshore CCS. “*Accelerating Offshore Carbon Capture and Storage: Opportunities and Challenges for CO₂ Removal*” is based on a workshop held by CWP in 2020, and the findings aim to help the development of policy framework, technical needs, and future large-scale infrastructure investments needed to capture and store CO₂ at scale.



UK Announces Funding for CCUS.



The UK’s Carbon Capture and Storage Association announced the funding of 14 projects, three of which relate to CCUS. In addition, the UK government also announced

funding for the *CCUS Innovation 2.0 Competition*, which supports projects that are developing novel technologies that reduce CCUS technology deployment costs.

White Paper on CCS Cost Guidelines Developed.

A consortium developed a white paper explaining cost guidelines for CCS. The *white paper* aims to help properly estimate costs involved in CCS projects to better inform investment and policy decisions.

UKRI Launches Research and Innovation Center.

UK Research and Innovation (UKRI) launched the Industrial Decarbonisation Research and Innovation Centre (IDRIC), which will be tasked with identifying and researching opportunities to reduce costs, risks, timescales, and carbon emissions. In addition, IDRIC will analyze ways to help decarbonization plans work more effectively to meet net-zero and economic targets in the UK.

CCS Projects Chosen for UK’s GHG Removal Program.

The UK government selected projects for *Phase I of its DAC and GHG removal program*. Among the winning projects are a bio-hydrogen with CCS project; a carbon capture and hydrogen production from biomass project that will separate and store CO₂ streams; a carbon-negative community energy project that will produce biochar for carbon storage; a project that will combine biochar production, combined heat and power generation, and CCUS; and a bioenergy with carbon capture and storage (BECCS) project. From *Bioenergy Insight*. May 2021.

Companies Agree to Advance CCS Project.

Equinor and Horisont Energi agreed to advance a CCS project in the Barents Sea, off the coast of northern Norway. The two Norwegian companies entered into the joint development agreement for the Polaris project, which is expected to have the potential to store more than 100 million metric tons of CO₂. After the feasibility phase, Polaris will enter the concept phase, with startup anticipated in 2025. From *Upstream*. May 2021.

PROJECT and BUSINESS DEVELOPMENTS *(cont.)*

Companies Partner on BECCS Project.

Drax Group and Mitsubishi Heavy Industries (MHI) agreed to collaborate on a BECCS project at Drax's power station in North Yorkshire, England. The power station has been converted to use sustainable biomass instead of coal, reducing its CO₂ emissions by more than 85%. By using MHI's carbon capture solvent and deploying BECCS technology, Drax aims to have their first BECCS unit operational as soon as 2027, capturing and storing at least 8 million metric tons of CO₂ a year by 2030. From *Power Engineering International*. June 2021.

UK to Invest in Large-Scale GHG Removal Projects.

UKRI will invest in projects to investigate the viability of five methods of large-scale GHG removal, with a goal of helping the UK reach its net-zero target by 2050. One of the research areas includes afforestation and assessing effective locations for carbon storage. The five interdisciplinary projects will conduct research over 4.5 years to better understand the effectiveness, cost, and limitations of the methods at scale. From *UKRI*. May 2021.

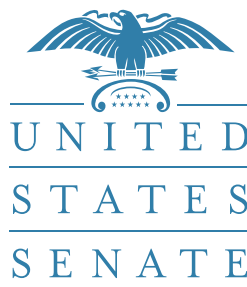


UK Research and Innovation

LEGISLATION and POLICY

U.S. Senators' Coalition Seeks Update on CCUS Legislation.

A coalition of U.S. Senators signed a letter to the White House Council on Environmental Quality seeking an update on the implementation of the Utilizing Significant Emissions with Innovative Technologies (USE IT) Act. *Introduced in 2019*, the USE IT Act was signed into law as part of the *Consolidated Appropriations Act of 2021* to support the development of CCUS projects. From *U.S. Senator Kevin Cramer Press Release*. May 2021.



U.S. Senators Introduce Bill to Help CCUS Projects.

U.S. Senators introduced legislation that would help support domestic energy production, create new economic opportunities, and reduce CO₂ emissions. *The Carbon Capture Improvement Act* would make it easier for power plants and industrial facilities to finance the purchase and installation of CCUS equipment using private activity bonds (PABs), which are tax-exempt. Under the bill, if more than 65% of CO₂ emissions from a facility are captured and stored underground, then 100% of the eligible equipment can be financed with PABs. The bill would also allow facilities to utilize the existing 45Q tax credit for carbon storage for industrial emissions. From *U.S. Senator Rob Portman Press Release*. May 2021.

Legislation Incentivizes Carbon Storage.

Legislation was introduced in the U.S. Senate to incentivize investment in climate-forward forestry practices, such as carbon storage. In addition to encouraging forest landowners to adopt voluntary practices to capture CO₂, the *Rural Forest Markets Act* would establish an investment program at USDA to offer guaranteed loans for companies to help small and family foresters create and sell forest credits for storing CO₂. From *Congresswoman Elise Stefanick Press Release*. June 2021.

EU To Unveil Policy Measures.

The European Commission announced plans to unveil a range of new policy measures to help the European Union (EU) reach its target of 55% emissions reductions (compared to 1990 levels) by 2030. The Commission's *"Fit for 55"* package includes a new carbon border adjustment mechanism and, according to officials, could help to strengthen the EU Emissions Trading System (ETS). From *Recharge News*. May 2021.



EMISSIONS TRADING

RGGI States Release Market Reports.

The states participating in the Regional Greenhouse Gas Initiative (RGGI) released the *Annual Report on the Market for RGGI CO₂ Allowances: 2020* and the *Report on the Secondary Market for RGGI CO₂ Allowances: First Quarter 2021*. The annual market report for 2020 reviewed four auctions in 2020 and found no evidence of anti-competitive conduct. The report for the first quarter of 2021 also found no evidence of anti-competitive conduct. From *RGGI News*. May 2021.



available were sold. (The CCR is a fixed additional supply of allowances made available if CO₂ allowance prices exceed certain price levels [\$13.00 in 2021].) None of the 11.31 million emissions containment reserve (ECR) allowances made available were sold. (The ECR is a designated quantity of allowances to be withheld if an auction's interim clearing price is below an established price level [\$6.00 in 2021]). Auction 52 generated \$183,212,120 for states to reinvest in strategic programs, including energy efficiency, renewable energy, and GHG abatement programs. Additional details are available in the *Market Monitor Report for Auction 52*. From *RGGI News Release*. June 2021.

UK Hosts First CO₂ Emission Auction.

The Intercontinental Exchange, Inc. (ICE) hosted the UK's first emissions trading scheme (UK ETS). In addition to providing continuity from the EU ETS, the scheme also focuses efforts to reach the UK's goal of reaching net-zero GHG emissions by 2050. From *mondaq*. May 2021.



Results of 52nd RGGI Auction Released.

The RGGI-participating states announced the results of their 52nd auction of CO₂ allowances. A total of 22,987,719 CO₂ allowances were sold at a clearing price of \$7.97, with bids ranging from \$2.38 to \$12.51 per allowance. In addition, none of the 11.98 million cost containment reserve (CCR) allowances made

SCIENCE

Canadian Project Uses Seeds to Store CO₂.

A project based in British Columbia, Canada, will use seeds to regenerate large swathes of land to store CO₂. Seed the North will collect seeds, combine them in biodiverse seedpods, and use drone technology to drop them over target areas disturbed by natural events and industry for forest regeneration. From *Crosscut*. May 2021.

Companies to Collaborate on CCS Monitoring Research.

Geoscience technology companies *CGG* and *Geopic* signed an R&D agreement to jointly research and assess a novel borehole solution for monitoring CO₂ in underground storage sites. The collaboration is focused on delivering a new, continuous, long-term underground monitoring solution that will reduce the risks associated with potential CO₂ release and enhance the safety of CO₂ storage projects. From *Carbon Capture Journal*. June 2021.

PUBLICATIONS

Developing and validating pressure management and plume control strategies.

The following is from the abstract of this DOE/NETL publication: "The U.S. Department of Energy's (DOE) Office of Fossil Energy (FE) plays a key role in advancing transformative and innovative Carbon Capture Utilization and Storage (CCUS) technologies. In its efforts to ensure safe and secure storage of carbon dioxide (CO₂) in a variety of geologic depositional environments, FE is investing in the development of systems for reservoir pressure management in terms of optimizing storage safety and performance. DOE supports a unique set of projects that are exploring brine extraction strategies as an approach to manage reservoir pressure and storage efficiency for CO₂ storage sites that may call for such measures. These Brine Extraction Storage Test (BEST) projects have followed a two-phased research approach. Five Phase I projects (completed) carried out modeling and other analyses to support development of pressure management strategies for potential field projects, focusing on five areas/formations representing important potential geologic storage opportunities in the United States. The modeling studies showed how the reservoir characteristics of the various potential storage formations would impact pressure reduction achieved for various injection/extraction scenarios. Life cycle analysis (LCA) studies performed by the projects highlighted the likelihood of encountering very high total dissolved solids (TDS) brines in many saline formation storage projects, as well as the challenges of handling these brines. Two projects have advanced to Phase II (ongoing) to validate brine extraction strategies through injection/extraction of brine and monitoring of differential pressures at active wastewater disposal facilities. Both Phase II projects also host facilities for testing emerging enhanced water recovery (EWR) technologies." **Andrea McNemar, Larry Myer, Darin Damiani, Mark McKoy, and Grant Bromhal**, *Proceedings of the 15th Greenhouse Gas Control Technologies Conference*.



Champagne-Inspired Technology Captures, Stores CO₂.

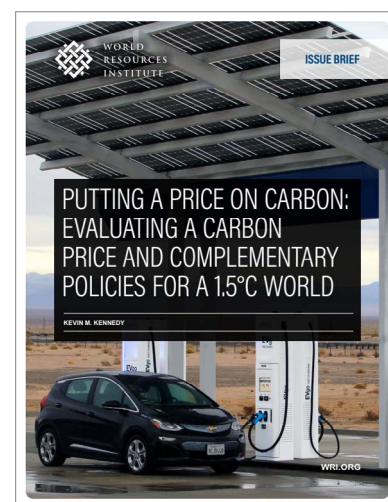
Scientists from the University of Exeter developed a CO₂ capture technology that mirrors the way CO₂ bubbles can be captured from a fizzy drink. Their solution uses natural-based processes and renewable energy to remove carbon from seawater that can then be returned to capture more CO₂. The technology makes the seawater temporarily more acidic, allowing the CO₂ to "bubble out." While the CO₂ is stored, the carbon-depleted water is released back to the ocean. Initial plans are for the research team to design a pilot plant capable of capturing at least 100 metric tons of CO₂ a year. The project was awarded a grant from the *Net-Zero Innovation Portfolio*, which is run by the UK Department for Business, Energy, and Industrial Strategy. From *Energy Live News*. May 2021.



**Department for
Business, Energy
& Industrial Strategy**

Putting a Price on Carbon: Evaluating A Carbon Price and Complementary Policies for a 1.5° World.

The following is from the Executive Summary of this World Resources Institute report: "The increasing effects of climate change highlight the need to rapidly transform the global economy to achieve the Paris Agreement goals and limit global warming this century to well below 2°C, while aiming for 1.5°C. Deeply decarbonizing the U.S. energy system by 2050 will require rapidly increasing energy efficiency, decarbonizing electricity supply, and electrifying energy end uses, including buildings, transportation, and industry. A carbon price is needed to incorporate climate change costs into economic decision-making to significantly reduce U.S. greenhouse gas emissions, particularly in the electricity sector; however, a price is not a silver bullet for addressing climate change. Policies and programs that address externalities other than the cost of climate change and that provide incentives to develop and deploy long lead time mitigation options are needed in addition to a price on carbon so that deep emission reductions can be achieved in the longer term. Measures are needed to bend the cost curve and remove the market barriers that hinder long-term emission reductions. Such measures should be evaluated based on their ability to minimize the cost of achieving long-term emission targets rather than on their cost in achieving near-term emission reductions."



PUBLICATIONS (cont.)

Does CCS reduce power generation flexibility? A dynamic study of combined cycles with post-combustion CO₂ capture.

The following is from the abstract of this article: "To date, the deployment, integration, and utilization of intermittent renewable energy sources, such as wind and solar power, in the global energy system has been the cornerstone of efforts to combat climate change. At the same time, it is recognized that renewable power represents only one element of the portfolio of technologies that will be required to deliver a technically feasible and financially viable energy system. In this context, carbon capture and storage (CCS) is understood to play a uniquely important role, providing significant value through flexible operation. It is therefore of vital importance that CCS technology can operate synergistically with intermittent renewable power sources, and consequently ensuring that CCS does not inhibit the flexible and dispatchable nature of thermal power plants. This work analyses the intrinsic dynamic performance of the power and CO₂ capture plants independently and as an integrated system. Since the power plant represents the fast dynamics of the system and the steam extraction is the main point of integration between the CO₂ capture and power plants, disturbances with fast dynamics are imposed on the steam extraction valve during steady state and dynamic operation of a natural gas combined cycle (NGCC) to study the effects of the integration on power generation capacity. The results demonstrate that the integration of liquid-absorbent based post-combustion CO₂ capture has negligible impact on the power generation dynamics of the NGCC." **Jairo Rúa, Mai Bui, Lars O. Nord, and Niall Mac Dowell**, *International Journal of Greenhouse Gas Control*. (Subscription may be required.)

Deploying gas power with CCS: The role of operational flexibility, merit order and the future energy system.

The following is the abstract of this article: "Combined cycle gas turbine (CCGT) power plants are an important part of many electricity systems. By fitting them with carbon capture their CO₂ emissions could be virtually eliminated. [The authors] evaluate CCGT plants with different variations of post combustion capture using amine solvents, covering a range of options, including solvent storage, partial capture and shifting the energy penalty in time. The analysis is based on the UK electricity system in 2025. The behaviour of individual CCGT plants is governed by the plant's place in the merit order and to a lesser extent by CO₂ reduction targets for the electricity system. In the UK, CCGT plants built from 2016 onwards will emit ~90% of the CO₂ emissions of the whole CCGT fleet in 2025. The typical 'base case' CCGT plant with capture is designed to capture 90% of the CO₂ emissions and to operate dynamically with the power plant. Downsizing the capture facility could be attractive for low-merit plants, i.e. plants with high short-run marginal costs. Solvent storage enables electricity generation to be decoupled in time from the energy penalty associated with carbon capture. Beyond a few minutes of solvent storage, substantial tanks would be needed. If solvent storage is to play an important role, it will require definitions of 'capture ready' to be expanded to ensure sufficient land is available." **Matthias A. Schnellmann, Chi Kong Chyong, David M. Reiner, and Stuart A. Scott**, *International Journal of Greenhouse Gas Control*. (Subscription may be required.)

Is aquatic bioenergy with carbon capture and storage a sustainable negative emission technology? Insights from a spatially explicit environmental life-cycle assessment.

The following is from the abstract of this article: "It is anticipated that achievement of the Paris Climate Agreement goals will require widespread deployment of negative emission technologies (NETs). The most prominent NET is bioenergy with carbon capture and storage (BECCS), which is typically envisioned to use terrestrial crops as feedstock. Several recent studies have focused on aquatic BECCS (A-BECCS), making use of microalgae or macroalgae as feedstock, as possible means of reducing water and land use. However, the high logistical complexity of the A-BECCS supply chain makes it likely that regional biophysical and socio-technical factors will strongly influence its overall favorability. Therefore, this study applies life-cycle assessment (LCA) incorporating a geographic information system (GIS) framework to estimate the environmental

impacts of A-BECCS over all stages of its life-cycle. Three candidate locations in the USA are evaluated based on seemingly good proximity to coastal regions and CO₂ storage; namely, East Coast, West Coast, and the Gulf of Mexico. Monte Carlo simulation is used to characterize distributions of model outputs, including energy return on investment (EROI) and net global warming potential (GWP). Results reveal that only the Gulf of Mexico configuration has any likelihood of achieving both net energy production (probability of EROI > 1 = 29%) and net CO₂ sequestration (probability of GWP < 0 = 6%), but the probability of achieving both together is very low (5%). The other two locations exhibit net positive energy production (EROI > 1), but not net negative carbon sequestration. These results call into question the feasibility of the modeled A-BECCS system as an energy-producing NET and offer insights into possible system reconfiguration. For example, anaerobic digestion offers very low EROI and creates multiple carbon-bearing waste streams, which strongly undercuts overall net CO₂ sequestration. Finally, it is observed that enhanced oil recovery (EOR) strongly contributes to net-energy production (EROI > 1) in the modeled A-BECCS system, but also strongly undercuts net CO₂ sequestration, which is arguably the main goal of any NET. This analysis showcases how geographically-explicit analysis can advance our understanding of biomass-based NETs." **A. Jasmin Melara, Udayan Singh, and Lisa M. Colosi**, *Energy Conversion and Management*. (Subscription may be required.)

Carbon storage potential of mangrove forests from Northeastern Vietnam.

The following is from the abstract of this article: "Quantifying the C storage in mangrove forests is important to understand their ecological roles in climate change mitigation. The present study aims to determine the whole ecosystem C storage and to examine factors influencing on the sedimentary C stocks in Dong Rui mangrove forests (DRM), northeastern Vietnam. The mean above- and below-ground C stock was 48.6 ± 11.7 and 554.8 ± 112.2 MgC ha⁻¹, respectively. In which, the sediment C pool contributed >80% proportion to the C storage. The covarying C/N ratios, δ¹³C and sediment compositions suggested that sedimentary OC were mainly originated from in situ productions. Results emphasized that the DRM has an important role in C sequestration and offsetting atmospheric CO₂ concentration and should be included in the climate change mitigation programs." **Nguyen Tai Tue, Nguyen Dinh Thai, and Mai Trong Nhuan**, *Regional Studies in Marine Science*. (Subscription may be required.)

Introducing BECCS through HPC to the research agenda: The case of combined heat and power in Stockholm.

The following is from the abstract of this article: "In the years since COP21 in Paris, awareness of the need for carbon sinks has grown rapidly. However, policy instruments supporting a path to this target are still lacking. Bioenergy carbon capture and storage (BECCS) may provide a way to rapidly reduce global warming. In the Nordics, much of the basic infrastructure for successful BECCS implementation is already in place. So why is not more happening? This study provides insights to barriers and policy implications in relation to successful BECCS implementation. Though implementation could support economic growth and welfare development, the cost is relatively high for individual utilities. In the deregulated competitive heating market in the case of Stockholm, cost transfer to customers is prohibited, effectively impeding implementation. Moreover, while present national or EU-based support schemes could cover investments, the operating cost is high, so other economic policy approaches are required. Lastly, this paper shows that BECCS on combined heat and power plants has a potential, but requires much more research. Thus it is suggested that negative emission technologies in energy systems are brought into research agendas such as the future of combined heat and power and urban multi energy systems." **Fabian Levihn, Linus Linde, Kåre Gustafsson, and Erik Dahlen**, *Energy Reports*. (Subscription may be required.)

ABOUT DOE'S CARBON STORAGE PROGRAM

The **Carbon Storage Program** at the National Energy Technology Laboratory (NETL) is focused on developing and advancing technologies to enable safe, cost-effective, permanent geologic storage of CO₂, both onshore and offshore, in different depositional environments. The technologies being developed will benefit both industrial and power sector facilities that will need to mitigate future CO₂ emissions. The program also serves to increase the understanding of the effectiveness of advanced technologies in different geologic reservoirs appropriate for CO₂ storage—including saline formations, oil reservoirs, natural gas reservoirs, unmineable coal, basalt formations, and organic-rich shale basins—and to improve the understanding of how CO₂ behaves in the subsurface. These objectives are key to increasing confidence in safe, effective, and permanent geologic CO₂ storage.

The [Carbon Storage Program Overview](#) webpage provides detailed information of the program's structure, as well as links to the webpages that summarize the program's key elements.

Carbon Storage Program Resources

Newsletters, program fact sheets, best practices manuals, roadmaps, educational resources, presentations, and more information related to the Carbon Storage Program is available on [DOE's Energy Data eXchange \(EDX\) website](#).



ABOUT NETL'S CARBON STORAGE NEWSLETTER

Compiled by the National Energy Technology Laboratory, this newsletter is a monthly summary of public and private sector carbon storage news from around the world. The article titles are links to the full text for those who would like to read more (note that all links were active at the time of publication).

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