



**To:** Council on Environmental Quality

**From:** Carbon Capture Coalition

**Contact:** Jessie Stolark

[jstolark@carboncapturecoalition.org](mailto:jstolark@carboncapturecoalition.org)

**Date:** April 18, 2022

**Re:** 87 FR 8808

## EXECUTIVE SUMMARY

Members of the Carbon Capture Coalition (the Coalition) have prepared these comments on the CCUS Interim Guidance in response to 87 FR 8808. The Coalition appreciates the White House Council on Environmental Quality's (CEQ) thoughtful analysis in this interim 'Carbon Capture, Utilization, and Sequestration Guidance' as mandated by the 2020-enacted bipartisan Utilizing Significant Emissions with Innovative Technologies Act (USE IT Act).

Many of the recommendations made within the interim guidance echo consensus-based positions developed by the Coalition's more than 90 companies, unions, and conservation and environmental organizations. Our members look forward to working with the Administration and Congress to ensure swift and efficient implementation of the historic carbon management provisions contained in both the USE IT Act and the recently-enacted bipartisan Infrastructure Investment and Jobs Act (IIJA).

Commercial-scale deployment of carbon management technologies, which includes carbon capture, removal, transport, utilization and storage, is fundamental to meeting the Administration's net-zero and midcentury climate goals. In its most recent *WGIII Climate Change 2022: Mitigation of Climate Change* report, the Intergovernmental Panel on Climate Change (IPCC) reaffirms the central role that these technologies will play in capturing carbon dioxide (CO<sub>2</sub>) from emitting sectors, as well as directly removing excess carbon dioxide from the atmosphere. In addition to project financing, engineering and design studies, successful project deployment will require both meaningful engagement and coordination with local communities, as well as timely and robust permitting processes at the state and federal level.

Carbon capture, transport and storage technologies have been proven at commercial scale in the United States. The U.S. has more than 50 years' experience safely transporting and storing CO<sub>2</sub>. Additionally, CO<sub>2</sub> can be safely and permanently stored in appropriate geological formations. The U.S. Environmental Protection Agency (EPA)

has a robust regulatory framework in place to monitor, verify and report CO<sub>2</sub> storage to maintain storage integrity and provide public confidence in the 45Q program. While direct air capture and carbon utilization are more nascent technologies, they will also play an important role in a deeply decarbonized economy and will be subject to many of the same permitting and reporting regimes that have been used for existing carbon capture, transport and storage projects.

Today, there are 12 commercial scale facilities capturing and safely storing CO<sub>2</sub> in the United States, with an additional nearly 90 publicly announced carbon capture, removal, transport and storage projects. These announced projects, which are in various stages of development, are in direct response to the revamped 45Q tax credit that was passed as part of the 2018 FUTURE Act. Taken together, the unprecedented technology demonstration and infrastructure investments in the IIJA and bipartisan enhancements to the 45Q program, which Coalition members hope to see included in any forthcoming budget reconciliation package, would result in an estimated 13-fold increase in carbon management capacity and annual CO<sub>2</sub> emissions reductions of 210-250 million metric tons by 2035.

However, proper permitting regimes are equally important to project finance, engineering and design. “Efficient, orderly, and responsible development” of carbon management projects will be fundamental to ensuring that these projects can fulfill their full emissions reduction potential in a responsible way while providing environmental and jobs benefits for Tribal Nations and affected communities.

As stated in the June 2021 CEQ permitting report mandated by the USE IT Act, “there is a robust CCUS regulatory framework in the United States to protect the environment and public health across multiple statutes. This framework is in place today, and there is a pathway for CCUS projects to receive permits and begin operations in compliance with environmental laws.” To that end, it is crucial that federal permitting agencies and project developers take a collaborative and early approach to engagement with affected communities and Tribal Nations consistent with the Administration’s midcentury climate goals.

The CCUS Interim Guidance is organized into four topic areas, and Coalition comments are organized similarly, with additional comments provided on how the agency may consider ensuring that positive economic benefits and job opportunities associated with carbon management project deployment flow to affected communities and Tribal Nations.

# 1. Facilitating Federal Decision-making on CCUS Projects and Carbon Dioxide Pipelines

## Programmatic EIS & the FAST Act authority:

The Coalition supports a coordinated, regional approach on permitting that safeguards public health, safety and the environment. However, the current timelines for permitting projects through federal processes decelerates our ability to scale the carbon management industry over the next decade to the deployment levels necessary to meet midcentury climate goals.

There is tremendous opportunity for a regional, shared infrastructure approach to develop not only carbon capture, removal, transport and storage projects, but also the production and use of low- and zero-carbon hydrogen.

Developing carbon capture, direct air capture and utilization, as well as low-carbon hydrogen projects in tandem with geologic storage in a ‘hubs’ approach will be critical to ensuring the Biden Administration’s emissions reduction targets can be achieved while minimizing undue impacts from the buildout of associated infrastructure on communities and the environment.

The federal government should use opportunities for colocation of these projects with new and existing infrastructure wherever practical to avoid additional disruptions to communities and damage to the natural environment. Tiered reviews will help expedite project development in a manner that maintains a rigorous permitting process.

The Coalition supports the use of the authority granted in the FAST Act to permit CCUS projects, even if such projects require less than \$200 million in economic investment. While the authorizations under the FAST Act are designed to improve the timeliness, predictability and transparency of the federal environmental review process, compliance with the program is voluntary. Therefore, the Coalition supports federal agencies implementing the authority established under the FAST Act to ensure that project development can move forward within timeframes that ensure successful project deployment.

We further support the CEQ recommendation that each agency, in consultation with the Permitting Council, establish an appropriate facilitating agency for each general CCUS project category and recommended performance schedules, as well as develop memoranda of understanding to establish the process that agencies will follow to collaborate on such reviews.

## Community Engagement:

The Coalition supports the early engagement of communities and Tribes. Project proponents should engage with Tribal Nations and affected communities prior to the scoping phase of projects, which require federal review and authorization, to better inform their proposed action. While not required by the permitting process, early and

constructive engagement prior to the scoping phase is a practice that will increase the chances of successful project deployment.

Additionally, effective stakeholder outreach should be an integral component of the environmental review process and incorporated into any federal decision record. In many cases, carbon capture retrofits and utilization projects will improve criteria air pollutants in surrounding areas, but the circumstances will be different at each facility. Broader concerns of individual communities with regards to project development on both environmental and other factors must be understood and addressed early in project development to ensure community support and successful project deployment. While these processes are already required of project developers undergoing the federal permitting process, federal agencies can provide information and serve as a repository for best practices in community engagement.

#### Transparency:

The Coalition has long supported the integrity of the federal Section 45Q tax credit through public transparency and accountability. In previous [comments to the Internal Revenue Service \(IRS\) and Department of the Treasury](#), the Coalition outlined principles and guidelines for an ISO-based program to provide for a demonstration of secure geologic storage associated with CO<sub>2</sub>-enhanced oil recovery that is equivalent to the existing EPA Subpart RR rule.

In those comments, the Coalition recommended specific supplementary transparency and accountability provisions for an ISO-based program to ensure equivalency and underscored the vital importance of such measures in the demonstration and reporting of secure geologic storage to maintain public confidence in the integrity of the 45Q tax credit. While the IRS has determined they do not have the statutory authority to disclose taxpayer information, the Coalition continues to strongly support requiring public disclosure of relevant documentation by taxpayers relying on this alternative ISO pathway and encourages IRS and EPA to explore ways to ensure public disclosure consistent with relevant statutory limitations, including additional reporting through the US Greenhouse Gas Reporting Program.

Additionally, as federal agencies promulgate rules that will govern the secure geologic storage of CO<sub>2</sub> on federal lands and in the offshore environment, relevant federal agencies should ensure the same level of transparency through reporting, monitoring and verification and transparency measures required by Subpart RR of the EPA Greenhouse Gas Reporting Program.

### Safety regulations:

Multiple analyses have found that to achieve net-zero emissions, a substantial buildout of CO<sub>2</sub> pipeline infrastructure will be needed to transport large quantities of captured CO<sub>2</sub> from industrial facilities, power plants and direct air capture facilities to points of utilization and/or permanent geologic storage.

The Carbon Capture Coalition has long-supported rigorous safety design, inspection and maintenance protocols associated with CO<sub>2</sub> capture, transport and storage infrastructure and recognizes the excellent historical safety record of such infrastructure.

CO<sub>2</sub> pipelines are regulated by the Department of Transportation's Pipeline Hazardous Materials and Safety Administration (PHMSA) and have operated in the United States for nearly 50 years with a strong safety record. Of over 10,600 hazardous liquid pipeline incidents reported to PHMSA in the past 36 years from September 1985 to August 2021, only 109 occurred with CO<sub>2</sub> pipelines, or 1 percent. Additionally, more than half of those 109 incidents involved the release of less than 15 metric tons of CO<sub>2</sub>.

However, in anticipation of an expanding CO<sub>2</sub> pipeline network due to the recent enactment of the bipartisan IIJA, we must make sure the existing regulatory framework enables efficient permitting while continuing to ensure CO<sub>2</sub> pipelines are designed, constructed and maintained at standards delivering the highest levels of reliability and safety. To achieve the necessary level of deployment of carbon management technologies in the timeframe needed to meet climate targets, it is imperative that the public has confidence in the safety of CO<sub>2</sub> pipelines.

The Coalition supports PHMSA's efforts to update first responder training for CO<sub>2</sub> pipeline safety incidents, and that training should be expanded to include local hospitals and 911 operators. The Coalition also supports project proponents considering potential climate change and geohazard impacts on CO<sub>2</sub> pipelines during design, siting, construction, and maintenance to ensure that pipeline networks are resilient and continue to operate safely over time.

Additional information from PHMSA on a variety of aspects of the CO<sub>2</sub> safety and regulatory environment will be useful to policymakers and stakeholders. CEQ should request that PHMSA provide a report to CEQ within 90 days of the close of these comments containing further public information on the safety record of CO<sub>2</sub> pipelines, an update on the current status of the CO<sub>2</sub> pipeline regulatory regime, including the funding levels the agency has received, and considerations for additional funding necessary as CO<sub>2</sub> pipeline infrastructure projects are deployed. PHMSA has also identified areas of research needed on CO<sub>2</sub> pipelines that may require additional agency funding, including the study of controlled releases on CO<sub>2</sub> pipelines, which should be included in this report.

The Coalition supports PHMSA working with stakeholders to accelerate the timetables for the development of any further standards and recommended practices with regards to the CO<sub>2</sub> safety and regulatory environment contained within such a report.

## **2. Public Engagement and Interdisciplinary Research**

The Coalition supports the engagement of communities and Tribal Nations around environmental justice and equity concerns as an integral part of the permitting process. CEQ can play a coordinating role in providing information on best practices around community engagement and Tribal Nation engagement. CEQ should consider the role of federal agencies in coordinating information and resources on the benefits of CCUS project deployment and best practices for community and Tribal Nation engagement, whether through the regional CCUS permitting task forces that CEQ is establishing, or through other mechanisms. As one example, non-profit organizations and national labs are already engaging at the state and local level and developing community engagement toolkits. These types of information and best practices should be widely available to project developers as they undertake community engagement as required by the permitting process.

## **3. Understanding Environmental Impacts**

Carbon capture retrofits are complex and capital intensive, so there is little risk of extending the lives of old, inefficient, and polluting facilities by adding carbon capture. Younger and relatively more efficient plants with significant remaining economic life pose the most serious challenge to climate change because, in most instances, without carbon capture deployment, such facilities will continue to emit CO<sub>2</sub> unabated, potentially for decades. These facilities are good candidates for carbon capture technology deployment. Bipartisan enhancements to the 45Q program, which the Coalition hopes to see included in any forthcoming budget reconciliation package, would provide positive economic incentives for heavy industry and power facilities to abate CO<sub>2</sub> emissions while preserving these existing facilities and their associated jobs and benefits to the local economy.

Carbon capture will provide air quality and environmental benefits, but further analysis is needed to quantify those benefits, as well as any impacts resulting from the retrofit of facilities. DOE has the technical expertise to coordinate an interagency study to assess and quantify pollutant reductions, as well as identify other pollutants that may be generated from carbon capture retrofits at industrial and power facilities and direct air capture facilities. The Coalition supports directing project developers receiving DOE cost-share funding to collect and submit applicable data on environmental benefits and impacts of projects in consultation with DOE. This analysis was first recommended by the Coalition to the Administration in January 2021 and again to House and Senate

appropriations members in 2022. It is urgently needed and should be undertaken promptly.

## **4. Carbon Capture and Utilization and Carbon Dioxide Removal**

The Coalition supports the creation of a federal repository for lifecycle analysis methodology, including building on the Federal LCA Commons. Lifecycle analyses differ in their scope, and a standardized approach will be required, if the federal government expects to establish standards, certifications for products, and eligibility for 45Q utilization pathways.

## **5. Jobs and Economic Opportunities from Carbon Management Project Deployment**

Deployment of carbon capture, removal, transport, utilization, and storage technologies will retain and create domestic high wage industrial, energy, and manufacturing jobs. Carbon capture projects at industrial facilities and power plants provide some of the most desirable clean energy and industrial jobs since employment associated with heavy industry (refining, chemicals, cement, steel, etc.) and power plants pays higher than average local wages, while preserving important facilities and infrastructure.

In addition, new and innovative high-skilled and high-wage industries will play a role in commercializing carbon capture and carbon removal, including jobs associated with new carbon removal and carbon utilization technologies. In many cases, the skills required for jobs in newly developing sectors such as carbon capture, carbon utilization and direct air capture will require similar skill sets to those of the industrial, energy, and manufacturing sectors. As a result, a well-trained labor pool already exists in many regions. Additionally, carbon capture retrofits will help decarbonize existing facilities, preventing their retirement and loss of associated high wage jobs.

CEQ should consider which federal agencies can play a role in ensuring that jobs and economic benefits from deployment of carbon management projects and infrastructure flow to affected communities. This may take the role of trade apprenticeships, partnerships with community colleges, and other training programs to ensure that members of local communities have the skills and experience to access project and operations jobs created through carbon management projects.

## **ABOUT US**

The Carbon Capture Coalition is a nonpartisan collaboration of more than 90 companies, unions, and conservation and environmental organizations jointly working to build federal policy support for economywide, commercial scale deployment of carbon management technologies and infrastructure. This includes carbon capture, removal, transport, utilization, and storage from industrial facilities, power plants, and ambient air. Economywide adoption of carbon management technologies is critical to achieving net zero emissions to meet midcentury climate goals; strengthening and decarbonizing domestic energy, industrial production and manufacturing; and retaining and expanding a high-wage jobs base. Convened by the Great Plains Institute, Coalition membership includes industry, energy, and technology companies; energy and industrial labor unions; and conservation, environmental, and energy policy organizations.