



To: House Committee on Natural Resources Republican Members
From: Subcommittee on Energy and Mineral Resources; Ashley Nichols Ashley.Nichols@mail.house.gov (202-226-3044), Rebecca Konolige – Rebecca.Konolige@mail.house.gov (202-226-1879) and Rob MacGregor – Robert.MacGregor@mail.house.gov (202-424-9615)
Date: April 25, 2022
Subject: Hybrid Oversight Hearing titled, “The Opportunities and Risks of Offshore Carbon Storage in the Gulf of Mexico”

The Subcommittee on Energy and Mineral Resources will hold a hybrid oversight hearing titled “*The Opportunities and Risks of Offshore Carbon Storage in the Gulf of Mexico*” on **Thursday, April 28, 2022, at 9:30 a.m.**, in room 1324 Longworth House Office Building and online via Cisco WebEx.

Republican members are encouraged to take advantage of the opportunity to participate in person from the hearing room.

Member offices are requested to notify Ashley Nichols (Ashley.Nichols@mail.house.gov) **no later than Wednesday, April 27, at 4:30 p.m.**, if their Member intends to participate in the committee room or remotely via his/her laptop from another location. Submissions for the hearing record must be submitted through the Committee’s electronic repository at HNRCDocs@mail.house.gov. Please contact David DeMarco (David.DeMarco@mail.house.gov) or Everett Winnick (Everett.Winnick@mail.house.gov) should any technical difficulties arise.

I. KEY MESSAGES

- Carbon capture, utilization, and storage (CCUS) technologies have emerged as an innovative way to reduce carbon emissions. Capturing carbon dioxide and either storing it permanently underground, or repurposing the carbon for other applications, offers opportunities to decarbonize existing industries while creating new job opportunities in the United States.
- The Gulf of Mexico has been identified as a highly promising region for carbon storage. However, these activities have not yet taken place offshore in the United States, so uncertainties remain about how to best allow for development of CCUS offshore.



- The recent passage of the *Infrastructure Investment and Jobs Act* (IIJA; Pub. L. 117-58) authorized the Department of the Interior (DOI) to lease lands and grant rights-of-way (ROWs) and easements for the purposes of subsurface carbon storage on the Outer Continental Shelf (OCS). The IIJA also required DOI to issue regulations for offshore CCUS activities within one year of enactment, November 2022.
- As DOI develops regulations and best practices for offshore CCUS operations, it is imperative to recognize the need for regular offshore lease sales, sufficient seismic surveying, and the timely processing of ROWs to transport and store carbon offshore. The Biden administration’s refusal to schedule long-awaited offshore lease sales and publish a new offshore leasing plan has created short- and long-term barriers to advancing offshore carbon storage by delaying critical exploration activities.

II. WITNESSES

- **Erik Milito**, President, National Ocean Industries Association (NOIA) [*Republican witness*]
- **Dr. Tip Meckel**, Senior Research Scientist, Bureau of Economic Geology, University of Texas at Austin
- **Ms. Nichole Saunders**, Director & Senior Attorney, Energy Transition, Environmental Defense Fund
- **Mr. Carroll Muffett**, President and CEO, Center for International Environmental Law

III. BACKGROUND

Carbon Sequestration as a Tool for Emissions Reduction

The sequestration and storage of carbon dioxide in subsurface geologic formations, both onshore and offshore, is a relatively new technological method to reduce carbon emissions.¹ This process starts with the capture of carbon dioxide from either a large point source of emissions, such as a power plant or manufacturing facility, or directly from the air.² Once the carbon dioxide is separated from other gases in the emissions stream, it is either injected into underground geological formations for storage, or transported to another location for the carbon to be used in other applications.³ In the case of geologic storage, carbon dioxide is sealed underground by non-porous, impermeable rock.⁴ This storage is intended to be permanent.⁵

CCUS has emerged as an effective option for reducing carbon dioxide emissions into the atmosphere and may be particularly useful to industrial sectors that have few options to

¹ National Ocean Industries Association, “CARBON CAPTURE, USE, & STORAGE An Economic, Employment, and Climate Opportunity for the U.S. Offshore Region,” briefing paper, <https://www.noia.org/wp-content/uploads/2022/03/NOIA-CCUS-Policy-Paper-1.pdf>.

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

otherwise decarbonize, such as cement, steel, and chemical production.⁶ Additionally, the full-scale deployment of CCUS technologies in the United States could support an estimated 236,000 jobs across several economic sectors.⁷

While carbon sequestration operations are occurring onshore in the United States and offshore in several European countries, they have not yet occurred offshore in the United States. The OCS in the Gulf of Mexico has been identified as an area of great potential for CCUS, with large storage capacity and ideal geological properties (i.e. high porosity and permeability of rock formations, as well as sufficient seals for carbon containment).⁸ Further, offshore CCUS operations are unlikely to implicate potable water concerns or require negotiations with private landowners, providing certain advantages compared to onshore operations.⁹ However, offshore storage has other challenges to consider, and is likely to be more capital intensive.¹⁰

Role of the Department of the Interior (DOI)

The IJA amended the *Outer Continental Shelf Lands Act* (Pub. L. 95-372) to authorize the Secretary of the Interior to issue a lease, easement, or ROW on the OCS for the injection of carbon dioxide into sub-seabed geological formations for long-term carbon sequestration. The IJA also authorizes OCS leases, easements, and ROWs to be utilized for storage of renewable energy resources. DOI is required to promulgate related regulations within one year of enactment of IJA, with this deadline occurring in November 2022. Carbon sequestration activities will be primarily managed by the Bureau of Ocean Energy Management (BOEM), with the Bureau of Safety and Environmental Enforcement (BSEE) handling associated safety and pipeline regulations.

As this is an emerging sector in the United States, these upcoming regulations will truly set the stage for offshore CCUS activities going forward. It is imperative that regulations are thoroughly researched and developed with full input from the regulated communities to ensure a predictable, safe, and efficient regulatory environment for future development.

Challenges and Ongoing Considerations for Full Scale Development

One challenge that is unique to carbon sequestration – both onshore and offshore— is that capturing and storing carbon today does not generate economic value on its own.¹¹ This activity

⁶ International Energy Agency, “Transforming Industry through CCUS,” May 2019, <https://www.iea.org/reports/transforming-industry-through-ccus>.

⁷ National Petroleum Council, USEA Consensus Program Briefing Webinar, Meeting the Dual Challenge: A Roadmap to At-Scale Deployment of Carbon Capture, Use, and Storage, April 14, 2021, <https://usea.org/sites/default/files/event-NPC%20CCUS%20Study%20Overview%20for%20USEA%20Consensus%20Program%20on%20CCUS%20Commercialization%20-%20Apr%202021%20-%20Nigel%20Jenvey.pdf>.

⁸ National Ocean Industries Association, “CARBON CAPTURE, USE, & STORAGE An Economic, Employment, and Climate Opportunity for the U.S. Offshore Region,” briefing paper, <https://www.noia.org/wp-content/uploads/2022/03/NOIA-CCUS-Policy-Paper-1.pdf>.

⁹ National Ocean Industries Association, bipartisan staff briefing regarding offshore carbon capture, utilization, and storage, April 18, 2022.

¹⁰ *Id.*

¹¹ *Id.*

is inherently different from other industries, in which a commodity or product has innate monetary value that can be traded on the market. As a result, the expensive process of sequestering carbon must be monetized to provide the economic incentive for private industry investment to carry out CCUS operations. Today, economic incentive is provided through a specific federal tax credit, often referred to as the “45Q” credit after its Internal Revenue Code section.¹²

Another uncertainty for both onshore and offshore carbon sequestration is the question of leasing terms and ultimate long-term liability. The appropriate lease term for carbon sequestration has yet to be determined. As carbon storage is meant to be permanent, operators will be interested in returning the leased acreage back to the federal government after a certain period of time, with long-term safety and monitoring responsibilities falling back on land management agencies and other applicable governing entities.¹³ Given that CCUS technologies are relatively new, case studies and best practices for long-term management are not yet available.

Finally, regular offshore leasing and regulatory certainty are essential to the development of carbon sequestration operations in the Gulf of Mexico. Predictable leasing, efficient processing of ROWs, and regular seismic surveying are all as critical to carbon sequestration as they are to oil and gas development. Lands for offshore carbon sequestration are leased through the same 5-year planning structure as lands for offshore oil and gas production. Similarly, ROWs for the transportation of carbon dioxide offshore, such as pipelines, are also reviewed through the same processes as pipelines for oil and gas. Geological and geophysical seismic surveying is needed to properly locate ideal CCUS sites and well placements.¹⁴

Unfortunately, the Biden administration has not allowed offshore leasing and associated processes to move forward. After a months long delay, the Biden administration finally held a single offshore lease sale in November 2021, Lease Sale 257.¹⁵ The sale has since been vacated by the courts in an unprecedented decision, and DOI has refused to appeal, declining to defend its own work.¹⁶ Further, DOI has taken the position that the current five-year leasing program is set to expire on June 30, 2022,¹⁷ and progress on publishing the subsequent five-year program is long overdue. The lack of information about the next five-year leasing plan creates major uncertainty for future development on the OCS.

The Biden administration’s position on energy infrastructure has also been made clear and has shown itself to be contrary to the infrastructure needs of an emerging CCUS industry, beginning

¹² Congressional Research Service, “The Tax Credit for Carbon Sequestration (Section 45Q),” updated June 8, 2021, <https://sgp.fas.org/crs/misc/IF11455.pdf>.

¹³ National Ocean Industries Association, bipartisan staff briefing regarding offshore carbon capture, utilization, and storage, April 18, 2022.

¹⁴ *Id.*

¹⁵ U.S. Department of the Interior. Bureau of Ocean Energy Management, Lease Sale 257, <https://www.boem.gov/Sale-257>.

¹⁶ *Friends of the Earth v. Haaland.*, Civil Action No. 1:21-cv-2317 (D.D.C.).

¹⁷ *Id.*

with President Biden's cancellation of the Keystone XL pipeline on his first day in office.¹⁸ Further, Democrats on the Committee on Natural Resources have advocated for the complete removal of decommissioned pipelines from the OCS, and have marked up legislation such as H.R. 2643 (Brownley-CA), which would require examination of only the negative impacts of decommissioned pipelines and in some cases require removal.¹⁹ This anti-transmission policy is short-sighted, as removal of decommissioned infrastructure would likely do more environmental harm than good and some of these existing pipelines could be reused to transport carbon dioxide offshore.²⁰

The Biden administration's highly misguided decisions have already blocked offshore oil and gas development during a time of record-breaking energy prices. Continued refusal to allow offshore leasing will endanger future development of carbon sequestration operations as well.

¹⁸ Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (Jan. 20, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/>.

¹⁹ H.R. 2643, Offshore Pipeline Safety Act (117th Congress), <https://www.congress.gov/bill/117th-congress/house-bill/2643>.

²⁰ National Ocean Industries Association, bipartisan staff briefing regarding offshore carbon capture, utilization, and storage, April 18, 2022.