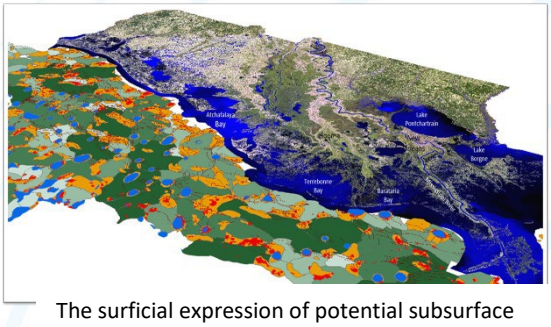
BOEM BUREAU OF OCEAN ENERGY MANAGEMENT

Carbon Sequestration

Overview

Carbon sequestration (CS) refers to a process of storing captured carbon dioxide (CO_2) that leads to a reduction of CO_2 in the atmosphere. Carbon sequestration activities can take many forms. One form of long-term storage is injection of captured CO_2 into suitable underground geologic formations.

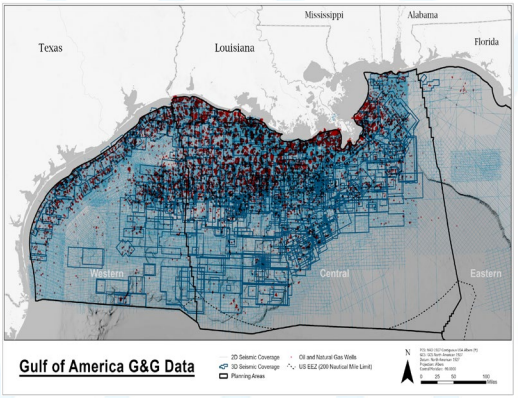
On November 15, 2021, the Infrastructure Investment and Jobs Act was signed into law and gave the Department of the Interior the authority to grant a lease, easement, or right-of-way on the Outer Continental Shelf (OCS) for long-term sequestration of carbon dioxide that would otherwise go into the atmosphere. BOEM is working with the Bureau of Safety and Environmental Enforcement (BSEE) on a draft rule to implement this authority over the OCS CS projects.



The surficial expression of potential subsurface storage units along the Louisiana coast. Saline aquifers (green), physical traps (orange), depleted reservoirs (red), and salt bodies (blue).

Storage Potential

BOEM has identified significant potential for CS in saline reservoirs and, to a lesser extent, depleted oil and gas reservoirs in the Gulf of America OCS. The nearly 160 million acres that make up the Gulf of America OCS provide a suitable and stable geologic basin with enormous potential capacity for CO_2 storage. This offshore storage capacity is often adjacent to industrialized coastal areas with infrastructure and technology that may be suitable for supporting CS activities. The prolific amount of geologic and geophysical data available in the Gulf of America, coupled with decades of operational experience, allows BOEM and its stakeholders and partners to identify areas with the greatest and safest potential for CS.



Map showing the location of oil and gas wells and 2D and 3D non-proprietary seismic data useful in exploring the potential storage capacity in the Gulf of America.

Next steps

BOEM and BSEE are working on a draft rule for public review and comment on how the Secretary of the Interior may grant a lease, easement, or right-of-way on the OCS for activities that provide for, support, or are directly related to the injection of a carbon dioxide stream into sub-seabed geological formations for the purpose of long-term carbon sequestration. BOEM and BSEE intend for this draft rule to provide sound regulatory oversight by both bureaus and to assure the American public that carbon sequestration operations on the OCS will be safe and protective of the marine and coastal environment.