

Risky Business: A Fact Sheet on Carbon Capture & Storage



The **Deep South Center for Environmental Justice** (DSCEJ) works to empower and engage communities to put environmental justice and equity at the center of all climate action.



The **Alliance for Affordable Energy** safeguards Louisiana's future by protecting consumers' right to an equitable, affordable and environmentally responsible energy system

"Carbon capture and storage" or **"CCS"** refers to unproven technologies intended to prevent carbon dioxide (CO₂) from reaching the atmosphere where it can trap heat on Earth and contribute to climate change. Plans for CCS involve either collecting CO₂ from industrial facilities or removing it from the air. Once collected or removed, the CO₂ is either injected underground for disposal or used in the production of more fossil fuels. CCS entails massive pipeline buildout for the transport of CO₂.



The burning of coal, oil, and natural gas produces CO₂. Industrial releases of CO₂ are part of a massive output of pollution that is disproportionately located in Black, Indigenous, Latino, Asian American and Pacific Islander communities. The coal, oil, and gas industry touts CCS as a "solution" to climate change, which it can profit from with massive tax breaks. The industry ignores the blatant racial inequity and disregards the significant environmental, health and safety risks of CCS. Each risk is an unjust burden on communities and a pathway for the release of CO₂ to the atmosphere which would worsen the climate crisis.

EQUITY & HUMAN RIGHTS CONCERNS

Coal, oil, and natural gas companies have chosen to operate intensely hazardous and polluting facilities near Black, Indigenous, Latino, Asian American and Pacific Islander communities. Under this inequity and denial of human rights, for example, an oil or gas facility is twice as likely to be located within two miles of the members of the Navajo nation than any other population in New Mexico. Nationally, oil and gas facilities operate on the borders of communities where residents are 75 percent more likely to be Black than White.

With CCS, a wave of new polluting energy facilities is being proposed that increases toxic emissions and expands to more communities the risks of CO₂ pipeline leaks and ruptures, as well as the potential for sinkholes, earthquakes, and groundwater contamination from the underground injection of CO₂.

VIABILITY CONCERNS

- CCS projects have consistently overpromised and under-delivered. The technology has not been proven to work at scale.

- CCS is significantly expensive to implement. Even with profuse subsidies, the technologies have shown not to be economically viable.
- The potential disasters induced by CCS, such as pipeline leaks and ruptures, sinkholes, groundwater contamination, and earthquakes would be extremely costly to remedy.

SAFETY CONCERNS

- Pipeline transport of CO₂ requires that it be shipped at very high pressure and extremely low temperatures.
- Condensed CO₂ is corrosive to the steel used to build pipelines, and pipeline structural integrity risks increase even more when water, a contaminant or other chemical impurity is present in the CO₂ stream.
- CO₂ streams can cause a leak, rupture, or a running fracture in a pipeline with the potential for catastrophic results that include deaths and severe injuries.
- Because of the intense pressures involved in CO₂ pipeline transport, there is an inherent risk of explosive decompression that releases more CO₂ more quickly than an equivalent of a gas pipeline.

HEALTH CONCERNS

- CO₂ is a dangerous asphyxiant. Unplanned or uncontrolled releases immediate physical risks to nearby people and property. The CO₂ pipeline rupture in Satartia, Mississippi on February 22, 2020 forced the evacuation of 300 residents and caused 45 people to be hospitalized.
- High levels of CO₂ exposure can result in rapid breathing, confusion, increased cardiac output, elevated blood pressure and increased arrhythmias. Breathing oxygen depleted air caused by extreme CO₂ concentrations can lead to death by suffocation.
- Collecting CO₂ from industrial facilities, as part of a CCS project, is unregulated and has the risk of adding other toxic chemicals to the CO₂ stream.
- Health-damaging pollutants, such as particulate matter (PM), nitrogen oxide, and ammonia, are all expected to increase with CCS as an add-on to proposed industrial facilities. These pollutants would increase air quality risks in overburdened communities.
- CCS perpetuates our dependence on coal, oil, and gas, which exacerbate public health hazards. The extraction, refinement, transport, use, manufacture, and disposal of these fossil fuels releases a wide array of pollutants, at every stage of the life cycle.

ENVIRONMENTAL & CLIMATE CONCERNS

CCS poses significant environmental risks from CO₂ pipeline corrosion and the failure of underground wells that include:

- Oxygen depletion
- Groundwater contamination
- Earthquakes
- Subsidence and sinkholes

CCS does not solve climate change because the technologies involve numerous pathways for potential releases of CO₂ to the atmosphere where it can trap heat on Earth and worsen the climate crisis.

Proposed Carbon Capture and Storage Projects in Louisiana (4/30/2022)			
Project Name/Company	Louisiana Location	Date Announced:	Proposed Start Date:
Air Products Inc.	Burnside (Ascension Parish)	October 14, 2021	2026
CF Industries	Donaldsonville (Ascension Parish)	October 19, 2020	2023
CP2 - Venture Global LNG	Cameron (Cameron Parish)	December 2, 2021	
Plaquemines - Venture Global LNG	Plaquemines Parish	N/A	2024
Gron Fuels / Capio Sequestration	West Baton Rouge Parish	April 22, 2021	
Hackberry Sequestration LLC - Sempra LNG, LLC	Black Lake, West Hackberry (Cameron Parish)	N/A	N/A
Gulf Coast Sequestration	Lake Charles (Calcasieu Parish)		
Lake Charles Methanol, LLC	Calcasieu Parish	2009 (as Leucadia); 2016	2025
River Bend CCS - Talos Energy, Enlink Midstream, Storegga UK	Iberville, St. James, Assumption, Lafourche Parishes	February 16, 2022	
Shell	St James Parish	October 2021	na
Diamond Vault - Cleco	Lena (Rapides Parish)	April 2022	2028
Denbury Inc.	Donaldsonville (Ascension Parish to lower Plaquemines Parish)		

ENDNOTES

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