



LOUISIANA WILDLIFE FEDERATION

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Carbon Capture, Utilization and Storage (CCUS) to Reduce CO₂ Emissions in Louisiana and Concerns About Siting in Lake Maurepas

BACKGROUND

In August of 2020, Louisiana Governor John Bel Edwards created the Climate Initiatives Task Force to ‘develop policies to reduce the greenhouse gas emissions that are driving up global temperatures, increasing sea level and other risks that threaten our health and safety, quality of life, economic growth, and vital habitats and ecosystems’ and charged the Task Force with making recommendations to reduce that state’s greenhouse emissions to net zero by 2050.

In August of 2021, Congress passed the federal Inflation Reduction Act (IRA) reconciliation package which included clean energy tax credits and other provisions intended to make significant progress towards America’s mid-century climate goal of net-zero carbon emissions by 2050 by reducing the cost of carbon capture, utilization and storage (CCUS).

CCUS is a process employed to reduce the amount of CO₂ in the atmosphere, whereby carbon is captured and either utilized for another process, or liquified and transported via pipelines for storage deep in subsurface geological formations.

Louisiana, as a result of its vast reserves of oil and gas, is one of the nation’s leading suppliers of energy, ranking fourth nationally in total energy consumption and second in per capita energy consumption, largely because of its energy-intensive chemical, petroleum, and natural gas industries and as a result, significant amounts of carbon dioxide (CO₂) is released into the atmosphere from these fossil fuel–burning plants and industrial activity like natural gas and hydrogen-producing facilities.

Generating more CO₂ than naturally occurs, speeds up the warming or “greenhouse” effect and increases global temperatures causing stronger storms and sea level rise.

A shift to renewable energy sources such as wind and solar generated power is widely promoted as the best course of action to reduce greenhouse emissions in the long term is fully supported by LWF as the preferred method of generating hydrogen, however, research and statistics suggest that such an immediate shift is not possible due to cost considerations, so attaining net zero greenhouse emission standards in the short term will rely on capturing CO₂ and utilizing or storing it.

According to the Council on Environmental Quality Report to Congress on Carbon Capture, Utilization and Sequestration achieving climate goals will likely require a significant increase in the need for liquid CO₂ transport infrastructure requiring increased development and deployment of CO₂ pipelines beyond the current 5,200 miles of dedicated pipeline available.

Louisiana possesses a unique combination of the right geology, pipeline infrastructure and a robust industrial sector from which to capture CO₂. CO₂ injection technology has also been used

for decades in Louisiana for enhanced oil recovery by which oil and gas companies inject high-pressure carbon dioxide deep into reservoirs to increase the amount extracted and is currently the only industrial process that uses carbon dioxide at a significant scale.

As a means of reaching the national goal of net-zero carbon emissions by 2050, the U.S. Department of Energy has established the Regional Clean Hydrogen Hubs program (H2Hubs) with \$7 billion in funding from the Bipartisan Infrastructure Law for the purpose of ‘establishing six to 10 regional clean hydrogen hubs to create networks of hydrogen producers, consumers, and local connective infrastructure in close proximity to each other to accelerate the use of hydrogen as a clean energy carrier that can deliver or store tremendous amounts of energy’.

In response, the Governors of Arkansas, Louisiana, and Oklahoma have announced a bipartisan three-state partnership, known as the HALO Hydrogen Hub, and filed an application for \$1.2B in H2Hub funding.

On October, 2021, Air Products Blue Energy, LLC, announced plans to construct a \$4.5 billion blue hydrogen complex in Darrow, Louisiana located in Asension Parish with plans to capture and store about 95% of the CO₂ produced from the production of hydrogen. The captured CO₂ is to be compressed and transported by pipeline to multiple inland sequestration sites located along a pipeline corridor extending up to 35 miles to the east of the complex in what Louisiana Economic Development has termed world’s largest permanent carbon dioxide sequestration endeavor to date, and;

Louisiana State Mineral & Energy Board (‘Board’) approved Resolution #21-10-051 on October 13, 2021 approving an Operating Agreement (‘Agreement’) between the Board and Air Products Blue Energy, LLC for the sequestration of CO₂ beneath state property in Lake Maurepas, Maurepas Swamp WMA and Sabine Lake, located in Livingston, St. James, St. John the Baptist, Tangipahoa and Cameron parishes; and

The Operating Agreement between the Board and Air Products Blue Energy, LLC describes the state properties subject to the sequestration contained in the Agreement as constituting approximately 122,455 acres including a tract comprised of 33,146 acres located in the Canal Bank area of the Maurepas Swamp Wildlife Management Area, a tract comprised of 57,100 acres consisting of Lake Maurepas and a tract comprised of 32,209 acres consisting of Sabine Lake; and

Lake Maurepas is a 15,000-plus acre estuarine system that receives freshwater from Blind River, the Amite River, the Tickfaw River and the Natalbany River and is home to bass, crappie, catfish and bream; resident birds, including wood ducks, black-bellied whistling ducks, egrets, and herons which can be found in the area year-round; and over 40 miles of shoreline, lined with cypress trees and vegetation.

The adjacent Maurepas Swamp Wildlife Management Area is home to bald eagles and osprey and numerous species of neotropical migrant birds who use this coastal forest habitat during fall and spring migrations.

Lake Maurepas is an ecologically important estuarine system supporting the life cycle of several important estuary-dependent species including fish, shrimp and crab, which is vitally important to wildlife and people and adequate mitigation of damage to this ecology cannot be guaranteed.

The White House Council on Environmental Quality guidance requires close monitoring and enforcement of existing regulations and the development of new tools to monitor and improve safety of CCUS projects while also reducing the number of incidents that result in leakage of carbon dioxide.

Residents living and working around Lake Maurepas have been vocal advocates against the speed in which this project is advancing concerned that regulators are not giving ample consideration to protecting area residents from the dangers of possible CO₂ leakage impacting aquifers with catastrophic failures risking human life; the potential for faults in the geological formations below the Lake; disruption to wildlife and fisheries from seismic testing; fears of over-dredging of the lake's water bottoms for deepening transport channels and subsidence from previous drilling.