REGIONAL CARBON CAPTURE DEPLOYMENT INITIATIVE

Louisiana

IMPLEMENTING CARBON CAPTURE AND STORAGE TECHNOLOGY

KEY TAKEAWAYS

- There are 324 facilities that qualify for the 45Q tax credit in Louisiana, which collectively account for 99.7 percent of all emissions from facilities in the state. These 324 facilities have an estimated potential to capture over 125 million metric tons of CO_2 a year. Fifteen new projects have been announced since 2022.
- As of 2019, Louisiana has the seventh highest CO_2 emissions in the nation with roughly 60 percent of emissions coming from the industrial sector and 14 percent from power generation.
- The Louisiana Geologic Sequestration of Carbon Dioxide Act is the cornerstone legislation within the state for future deployment of carbon management (carbon capture utilization and storage).
- Louisiana also has favorable geography for the saline storage of CO_2. One of the largest saline storage hubs in the nation (the CENLA Hub) is currently under development in Central Louisiana.

LEGISLATIVE CONTEXT

Louisiana has long recognized the benefits of carbon management and created a favorable legislative context to spur deployment of carbon capture technologies and infrastructure within the state. The Louisiana Geologic Sequestration of Carbon Dioxide Act, House Bill 661, passed in 2009 and is the foundation for carbon capture deployment in the state. The act includes four key facets: it authorizes the Department of Natural Resources to create a regulatory scheme for the injection, use and storage of CO_2; establishes state liability of injected CO_2 after ten years of storage; creates the Geologic Storage Trust Fund to manage and monitor the stored CO_2; and grants the state the ability to use eminent domain in the case of geologic sequestration projects.

Governor John Bel Edwards has prioritized carbon management for his administration. In 2020 Louisiana joined the CO_2 Transport Infrastructure Memorandum of Understanding (MOU) and worked with partner states to create the Regional CO_2 Transport Infrastructure Action Plan, which includes potential policies for states to consider to facilitate carbon dioxide transport and storage project deployment. Louisiana is also taking charge on Class VI permitting for carbon storage and has applied for Class VI primacy through the Environmental Protection Agency's Underground Injection Control Program. The Environmental Protection Agency has proposed to approve the state's application and once the state receives primacy, it will be able to manage the process for carbon management projects and help them capitalize on the 45Q federal tax credit for saline storage. In 2022, Governor Edwards' Climate Initiatives Task Force approved the state's first-ever Climate Action Plan, recognizing carbon management's critical role in addressing high-intensity and hard-to abate emissions that will be necessary to reach net zero.

SOURCES BY INDUSTRY & VOLUME

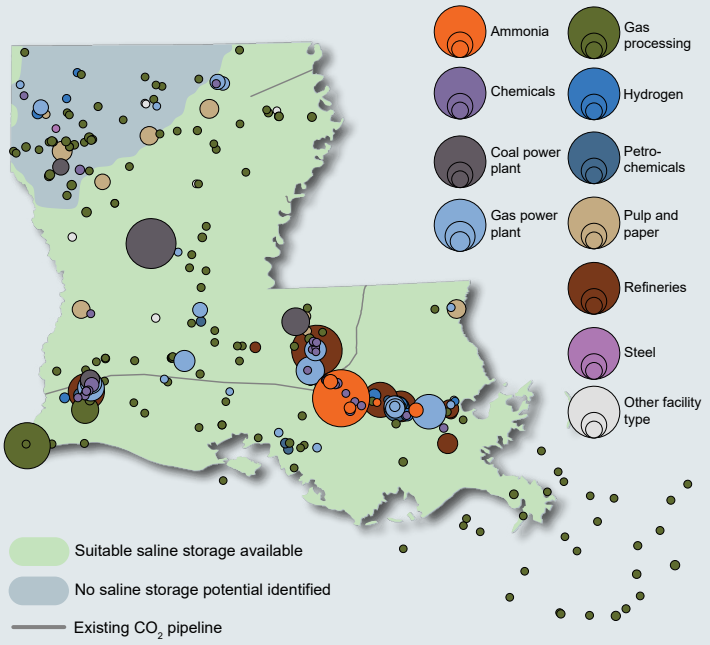


Figure 1: Louisiana has many industrial and power facilities large enough to qualify for the 45Q carbon capture tax credit. The points on the map show the location of these eligible facilities and their size is relative to their amount of annual CO_2 emissions. Existing pipelines in the state are also shown.

Source: Great Plains Institute 2023; EPA 2022.

The **Regional Carbon Capture Deployment Initiative** is a network of states that work together to help ensure near-term deployment of carbon capture projects that will benefit domestic energy production, reduce carbon emissions, and protect and create high-wage jobs. The Initiative provides unique and valuable opportunities for governors, state officials, legislators, and stakeholders to engage at the state, regional, and national levels

The Initiative is staffed by the Great Plains Institute (GPI), a nonpartisan, nonprofit working to transform the energy system to benefit the economy and environment. For more information on this effort, go to carboncaptureready.org or contact Matt Fry at **mfry@gpisd.net**.

Maps and graphics within this document are based on work by the Great Plains Institute (GPI) to help the Regional Carbon Capture Deployment Initiative identify facilities that qualify for the federal 45Q tax credit and are optimal near-term investment opportunities for carbon capture for each state. For more information, visit **carboncaptureready.org**.

CAPTURE AND STORAGE POTENTIAL

Louisiana is on the forefront of becoming a new carbon economy. It has the existing pipeline infrastructure and rights-of-way for carbon transport, a variety of CO_2 sources, and oil and gas operators with the requisite knowledge to make carbon capture projects work. In addition to the state's favorable geography for saline storage, Louisiana is also near the Permian Basin which is the world's largest existing hub for CO_2 capture, transport, reuse and geologic storage.

Along with transport infrastructure and ample nearby CO_2 storage, Louisiana also hosts a plethora of CO_2 emissions sources. Emissions from the state's industrial and power sector account for roughly 74 percent of the state's CO_2 emissions. Many industrial facilities present a low-cost opportunity for carbon capture, given the high purity of their emissions. The state is also a heavy producer and consumer of natural gas, accounting for roughly nine percent of the nation's natural gas production and nearly six percent of total US consumption. There are 23 gas power plants eligible for 45Q which have the potential to capture 19.3 million metric tons of CO_2 emissions annually. Additionally, the state supplies nearly one-fifth of the nation's oil refining capacity. All 16 of the state's refineries are eligible for 45Q with the combined potential to capture 25.2 million metric tons annually.

There are currently 15 projects under development across the state to capture more than 20 million metric tons of CO_2 every year safely and effectively. These projects, spanning eight different industries and energy sub-sectors, demonstrate Louisiana's commitment to advancing decarbonization efforts while simultaneously shoring up the most crucial components of the state's economy. In addition to launching more carbon management projects than any other state, Louisiana is also on track to lead the nation in carbon sequestration and storage. Nine companies have pending Class VI well applications for geologic storage in Louisiana with the EPA and six new storage facilities have been announced over the last 18 months. Among these is the Central Louisiana Regional Carbon Storage Hub (CENLA Hub): a saline storage facility projected to hold up to 1 billion metric tons of CO_2 safely and securely, deep underground. Once complete, the CENLA Hub will be one of the largest carbon storage facilities ever built in the United States.

Given this potential, Louisiana finds itself poised to remain at the forefront of this growing industry; with the possibility to realize billions of dollars in private investment, thousands of new jobs, and significant advancement toward meeting critical mid-century climate goals. The rapid growth of carbon management technology is made possible by the advancement of key federal legislation, as well as a longstanding commitment to this technology at a state level.

REGIONAL CAPTURE OPPORTUNITIES

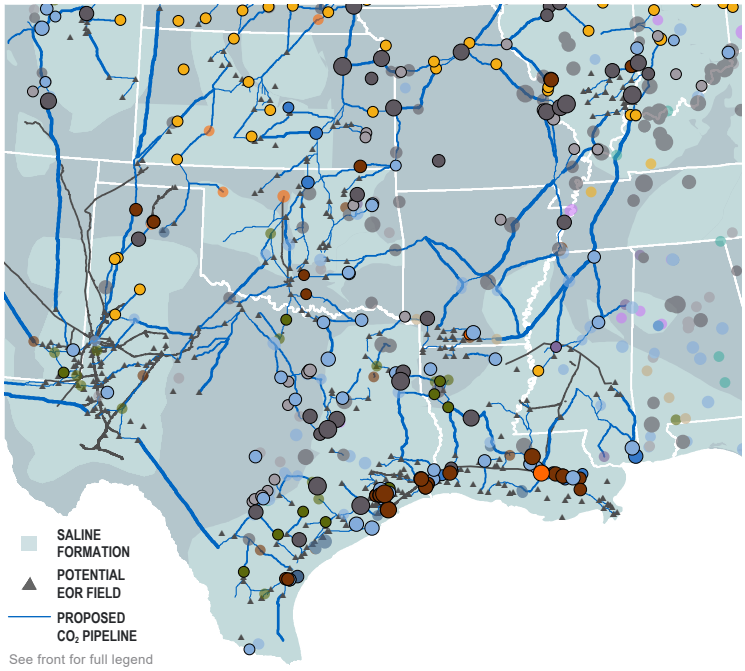
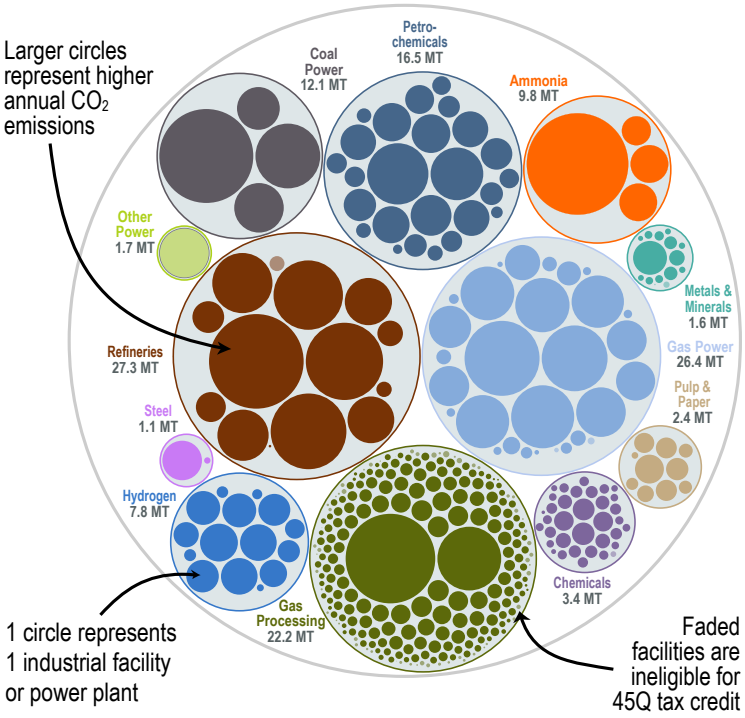


Figure 3: Potential regional CO_2 sources and pipeline corridors for transportation to utilization and storage sites as modeled by the Regional Carbon Capture Deployment Initiative.

FACILITIES AND EMISSIONS BY INDUSTRY



MT: Million metric tons CO_2

Figure 4: This bubble diagram visualizes the number of facilities and corresponding annual CO_2 emissions for each industry in Louisiana. The darker large bubbles are eligible for the 45Q carbon capture tax credit, while the faded bubbles are too small to be eligible. The total amount of CO_2 emissions in Louisiana is listed for each industry.

Source: GPI 2023; EPA 2022.

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