

Carbon Capture and Storage in Louisiana

Carbon capture and sequestration (CCS) has been touted as the solution to decarbonizing industry in the United States. The oil and gas industry has embraced carbon capture – often to inject carbon dioxide into the ground to produce more oil – and this practice is being subsidized by billions of dollars from the federal government. Of the 21 projects with EPA-approved monitoring, reporting and verification plans, about three quarters are by oil and gas companies, usually for "enhanced oil recovery" that will produce more petroleum to be burned. It remains unclear if the technology will work as a strategy to address climate change, in part because it subsidizes fossil fuel extraction and the monitoring data is entirely self-reported to EPA by companies, with no third-party verification. The Environmental Integrity Project's *Dil & Gas Watch* website is a free, public database that tracks new and expanding projects in the oil, gas and petrochemical industries and has been following associated carbon capture projects. As of December 2023, we have collected data on 93 proposed carbon capture projects across the U.S., including 43 in Louisiana and 22 in Texas. These include projects to capture carbon from the smokestacks of industrial operations – or directly from the air – and pipe it underground for storage, including in regional networks or "hubs." Oil & Gas Watch is also tracking 14 proposed carbon pipeline projects.

Below is a map and list showing the **43 proposed carbon capture projects in Louisiana**, including nine hydrogen or ammonia plants, four liquified natural gas (LNG) terminals, and one gas processing plant. The map excludes three projects for which locations are currently unknown.



This data is current as of December 2023, but is subject to change as more information is released. The data comes from a variety of sources, including public databases, government agencies, and Empower LLC's report on <u>Carbon Capture and Sequestration in Louisiana</u>. Please see Oil and Gas Watch for the most recent information. For questions, please contact ogwatch@environmentalintegrity.org

LIST OF CARBON CAPTURE PROJECTS IN LOUISIANA

#	Project Name	Company	Parish	Project Type	Announced Capture or Sequestration Amount (Metric Tons of CO ₂ Per Year)	Planned Operating Date
1	Donaldsonville Nitrogen Complex	CF Industries Nitrogen, LLC	Ascension	Ammonia Plant	2	2024
2	New Generation Gillis Treating Facility	New Generation Gas Gathering LLC	Beauregard	Gas Processing Plant	1.5	2024
3	Plaquemines LNG Terminal	Venture Global Plaquemines LNG, LLC	Plaquemines	LNG Terminal	up to 0.5	2025
4	Port Allen Renewable Gasoline Refinery	Arbor Renewable Gas LLC, Magnolia Renewable Fuels LLC	West Baton Rouge	Renewable Gasoline	1	2025
5	Cameron LNG Facility	Cameron LNG, LLC	Cameron	LNG Terminal	up to 2	2026
6	Air Products Darrow Blue Energy Facility	Air Products Blue Energy LLC	Ascension	Hydrogen/Ammonia Plant	5	2026
7	Louisiana Green Fuels Renewable Fuels Plant	Louisiana Green Fuels LLC, Strategic Biofuels	Caldwell	Renewable Diesel	1.36	2026
8	Nutrien Geismar Ammonia Plant*	PCS Nitrogen Fertilizer, LP	Ascension	Ammonia Plant	1.9	2026
9	Ascension Clean Energy Facility	Clean Hydrogen Works LA-1 LLC, Denbury Carbon Solutions, LLC, Hafnia, Mitsui O.S.K. Lines	Ascension	Ammonia Plant	12	2027
10	CF Industries/Mitsui Gulf Coast Blue Ammonia Plant (aka Blue Point Complex)	CF Industries Blue Point LLC, CF Industries Nitrogen, LLC, Mitsui & Co., Ltd.	Ascension	Ammonia Plant	2	2027
11	Commonwealth LNG Terminal	Commonwealth LNG LLC	Cameron	LNG Terminal	Unknown	2027
12	G2 Net-Zero Energy Complex	G2 Net-Zero LNG LLC	Cameron	Ammonia Plant	4	2027
13	Gron Fuels' Low Carbon Intensity Renewable Fuels Plant	Gron Fuels LLC	West Baton Rouge	Renewable Diesel	1	2027
14	Lake Charles Methanol Plant	Denbury Carbon Solutions, LLC, Lake Charles Methanol II, LLC	Calcasieu	Methanol Plant	up to 1	2027
15	St. Rose Blue Ammonia Facility	Copenhagen Infrastructure Partners, St. Charles Clean Fuels LLC, Sustainable Fuels Group	St Charles	Ammonia Plant	5	2027
16	CP2 and Calcasieu Pass LNG Terminals	Venture Global CP2 LNG LLC	Cameron	LNG Terminal	1	2028
17	Big Lake Fuels	Proman, Mitsubishi	Calcasieu	Ammonia Plant	Unknown	Unknown
18	Methanex Geismar Methanol Plant	Methanex USA Services LLC	Ascension	Methanol Plant	Unknown	Unknown
19	Gulf Coast Hydrogen Plant	Air Liquide Large Industries US LP, Chevron Products Company, LyondellBasell Industries, Uniper	Location not yet announced	Hydrogen/Ammonia Plant	Unknown	Unknown
20	Project Cypress DAC Hub	Battelle Memorial Institute, Climeworks Corporation, Heirloom Carbon Technologies	Calcasieu	Direct Air Capture	1	2025/2030
21	Pelican Gulf Coast Carbon Removal Project	Louisiana State University, Shell Catalysts and Technologies, University of Houston	Location not yet announced	Direct Air Capture	Unknown	Unknown
22	Gulf Coast Sequestration Hub	Gulf Coast Sequestration	Calcasieu	Sequestration Hub	2.7	2024
23	ExxonMobil Pecan Island Area CCS Project	ExxonMobil Low Carbon Solutions Onshore Storage LLC	Vermilion	Sequestration Hub	3.2	2025
24	Livingston Parish Sequestration Hub	1PointFive, Weyerhaeuser Company	Livingston	Sequestration Hub	6	2025
25	Milestone Carbon Sequestration Hub	Milestone Carbon	Terrebonne	Sequestration Hub	Unknown	2025

 $^{\star}\mbox{This}$ project is on hold as of August 2023.



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#	Project Name	Company	Parish	Project Type	Announced Capture or Sequestration Amount (Metric Tons of CO ₂ Per Year)	Planned Operating Date
26	Denbury Aries Sequestration Hub	Denbury Carbon Solutions, LLC	Assumption and St. James	Sequestration Hub	10-20*	2025-2026
27	Denbury Gemini Sequestration Hub	Denbury Carbon Solutions, LLC	Ascension	Sequestration Hub	10-20*	2025-2026
28	Blue Sky River Parish Sequestration Hub	Blue Sky Infrastructure	Ascension	Sequestration Hub	14	2026
29	Denbury Draco Sequestration Hub	tration Hub Denbury Carbon Solutions, LLC Allen, Beauregard, and Vernon Solutions, LLC Sequestration Hub 5-10		5-10	2026	
30	Denbury Virgo Sequestration Hub	Denbury Carbon Solutions, LLC, Soterra, LLC	St. Helena Parish	Sequestration Hub 5		2026
31	Harvest Bend CCS Hub	EnLink Midstream LLC, Storegga, Talos Energy Inc EnLink Midstream LLC, Storegga, Talos Energy Inc Assumption, Lafourche		Unknown	2026	
32	Denbury Pegasus Sequestration Site	Denbury Carbon Solutions, LLC	St. Bernard	Sequestration Hub	10-20+	2026-2027
33	Cameron Parish CO2 Hub	Carbonvert Inc, Castex Carbon Solutions, LLC	Cameron	Sequestration Hub	Unknown	2027
34	Denbury Libra Sequestration Hub	Denbury Carbon Solutions, LLC, Lapis Energy	St. Charles	Sequestration Hub	5-10	2027
35	Capio Sequestration Hub	Capio Sequestration LLC	Ascension, St. John the Baptist, Iberville, St. Martin, and Point Coupee	Sequestration Hub	1	2027
36	Central Louisiana Regional Carbon Storage Hub	CapturePoint Solutions, LLC	Rapides, Vernon	Sequestration Hub	Unknown	Unknown
37	Evergreen Sequestration Hub	Trace Carbon Solutions, Molpus Woodlands Group	Calcasieu, Beauregard	Sequestration Hub	Unknown	Unknown
38	Hackberry Carbon Sequestration Project	Hackberry Carbon Sequestration LLC	Cameron	Sequestration Hub	2	Unknown
39	Liberty CCS Hub	Shell Catalysts and Technologies	Location not yet announced	Sequestration Hub	1.7	Unknown
40	Louisiana Offshore CO2 Hub (a.k.a. Project Lochridge)	Carbon Zero US, Cox Operating, Crescent Midstream, Repsol SA	Unknown	Sequestration Hub	Unknown	Unknown
41	Magnolia Sequestration Hub	Magnolia Sequestration Hub LLC, Occidental Chemical Corporation	Allen	Sequestration Hub	4	Unknown
42	Project Roux Sequestration Hub**	ConocoPhillips Company	Lafourche	Sequestration Hub	Unknown	Unknown
43	West Bay Sequestration Hub	1PointFive	Allen	Sequestration Hub	Unknown	Unknown

*Denbury's Aries and Gemini hubs were announced to have a combined capacity of between 10 and 20 million metric tons of CO2 per year.

**ConocoPhillips withdrew their application for a coastal use permit to drill a well at this site in November 2023. The status of this project is unknown.



This table lists the **10 proposed carbon pipelines in Louisiana**, along with the carbon capture and sequestration projects they will connect.

#	Pipeline Name	Company	Associated Facilities	Operating Status	Actual or Expected Completion Year
1	EnLink CO2 Pipeline	Enlink CCS, LLC	ExxonMobil Pecan Island Area CCS Project, Harvest Bend CCS Hub, CF Industries/Mitsui Gulf Coast Blue Ammonia Plant (aka Blue Point Complex), Project Roux Sequestration Hub	Pre-construction	2025
2	Livingston Parish Sequestration Hub CO2 Pipeline	1PointFive, EnLink Midstream LLC	Livingston Parish Sequestration Hub	Pre-construction	2025
3	Air Products CO2 Pipeline	Air Products Blue Energy LLC	Air Products Darrow Blue Energy Facility	Pre-construction	2026
4	River Parish CO2 Pipeline	Blue Sky Infrastructure	Blue Sky River Parish Sequestration Hub	Pre-construction	2027
5	Hackberry Sequestration CO2 Pipeline	Sempra Infrastructure	Hackberry Carbon Sequestration Project	Pre-construction	Unknown
6	Energy Transfer CO2 Pipeline*	Energy Transfer LP, CapturePoint Solutions, LLC	Central Louisiana Regional Carbon Storage Hub	Announced	Unknown
7	Denbury CO2 Pipeline Expansion*	Denbury Inc.	Lake Charles Methanol Plant	Announced	Unknown
8	Venture Global CO2 Pipeline*	Venture Global LNG, Inc.	Calcasieu Pass LNG Terminal, Plaquemines LNG Terminal, CP2 LNG Terminal	Announced	Unknown
9	Pecan Island CO2 Pipeline*	ExxonMobil	Unknown	Announced	Unknown
10	Crescent Midstream CO2 Pipeline*	Crescent Midstream	Louisiana Offshore CO2 Hub (a.k.a. Project Lochridge)	Announced	Unknown

 $\ensuremath{^{\ast}\text{Developers}}$ of pipelines marked by asterisks have not made the routes public.



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