

*CARBON  
CAPTURE &  
SEQUESTRATION  
IN LOUISIANA*

*Part 3:  
Insuring A New Industry*

*June 21, 2023*



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## INTRODUCTION

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This report is the final installment in a series of three research publications about the planned development of carbon capture and sequestration (CCS) projects in Louisiana. Part 1 presented findings on the current state of infrastructure plans in the state, with detailed maps and information on federal and state permitting. Part 2 examined the financing of planned CCS projects, which will be heavily dependent on money from the federal government. Part 3 now addresses the considerable environmental and safety risks inherent in transporting CO<sub>2</sub> across hundreds or thousands of miles and storing it underground, as well as the insurance policies that put a price on those risks.

In order to be stored underground, CO<sub>2</sub> must be captured and transported by pipeline. Only two companies have well-developed plans for CO<sub>2</sub> pipeline networks in Louisiana. One of those, Denbury (NYSE:DEN), arrived at an agreement in April 2023 to pay the second-largest fine ever levied by the Pipeline and Hazardous Materials Safety Administration (PHMSA) for a February 2020 CO<sub>2</sub> pipeline explosion in Mississippi that is connected to the same network it plans to expand across Louisiana.<sup>1</sup> The explosion sent 49 people to the hospital, many of whom suffered lasting health effects, and required the evacuation of over 200 people in a rural area.<sup>2</sup> The resulting PHMSA investigation found that Denbury did not establish an adequate atmospheric model to prepare for emergency releases and did not inform local emergency responders of the rupture, leaving them to guess what had gone wrong as they rescued people from the area, some of whom were rendered unconscious and would have died were it not for first-responder heroic actions.

Counterintuitively, what may be most concerning about the recent explosion is that the pipeline was found to have no defects. Rather, the rupture was caused by soil movement in response to unusually heavy rainfall.<sup>3</sup> This means that similar incidents could pose risks across Louisiana, where unusual weather events and flooding have become normal, even when CO<sub>2</sub> pipelines are in good operating condition. Given the massive pipeline expansion that will be required for CCS to be viable in the United States,<sup>4</sup> this may be an unavoidable consequence of underground sequestration plans.

A 2022 Congressional Research Service report notes that "CO<sub>2</sub> pipelines pose a public safety risk" and that CO<sub>2</sub> pipeline transportation "requires attention to pipeline design, protection against corrosion, monitoring for leaks, and safeguards against overpressure, especially in populated areas."<sup>5</sup> In an alarming development, Denbury's plans for CCS expansion now include a pipeline that would run through the New Orleans metro area.<sup>6</sup>

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<sup>1</sup> Pipeline Safety Trust, "Department of Transportation's PHMSA Issues Second Largest Civil Penalty in Agency History to Denbury Gulf Coast Pipeline LLC Following Disastrous 2020 CO<sub>2</sub> Pipeline Leak in Satartia, Mississippi," press release, 6 April 2023, [pstrust.org/department-of-transportations-phmsa-issues-second-largest-civil-penalty-in-agency-history-to-denbury-gulf-coast-pipeline-llc-following-disastrous-2020-co2-pipeline-leak-in-satartia-mississippi](https://pstrust.org/department-of-transportations-phmsa-issues-second-largest-civil-penalty-in-agency-history-to-denbury-gulf-coast-pipeline-llc-following-disastrous-2020-co2-pipeline-leak-in-satartia-mississippi).

<sup>2</sup> Dan Zegart, "The Gassing Of Satartia," *HuffPost*, 26 August 2021, [www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline\\_n\\_60ddea9fe4b0ddef8b0ddc8f](https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f).

<sup>3</sup> Pipeline and Hazardous Materials Safety Administration, "Failure Investigation Report - Denbury Gulf Coast Pipelines, LLC – Pipeline Rupture / Natural Force Damage," 26 May 2022, [www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf](https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf).

<sup>4</sup> Congressional Research Service, "Carbon Dioxide Pipelines: Safety Issues," 3 June 2022, [crsreports.congress.gov/product/pdf/IN/IN11944](https://crsreports.congress.gov/product/pdf/IN/IN11944).

<sup>5</sup> *Ibid.*

<sup>6</sup> Denbury, "Carbon Capture, Utilization, and Storage (CCUS) Business Outlook," Investor call and presentation, 13 December 2022, [investors.denbury.com/investors/events-and-presentations/events/event-details/2022/CCUS-Business-Outlook-Virtual/default.aspx](https://investors.denbury.com/investors/events-and-presentations/events/event-details/2022/CCUS-Business-Outlook-Virtual/default.aspx).

A number of the planned CO<sub>2</sub> storage reservoirs, which can be viewed in the maps contained in Part 1 of this series, are located under freshwater lakes and offshore, where leakages could provoke groundwater contamination<sup>7</sup> and ocean acidification,<sup>8</sup> respectively. Several major CO<sub>2</sub> storage reservoirs are planned for injection under bodies of water.

The risk of underground leakage is well-known to the industry, which is required to purchase insurance policies to account for it. An insurance broker consulted for this research recommends a "two-policy approach" that covers most U.S. Environmental Protection Agency (EPA) and state requirements: a surety bond for clean-up and corrective action costs and a pollution insurance policy for general liability and emergency response and remediation. Through public records requests to regulatory agencies, the research for this report identified 12 insurers that have already provided policies for Louisiana CCS projects of up to 10 million USD.

Private-sector insurance policies, though, have limits. They cannot undo irreversible damage and they do not cover leakage risks indefinitely. The Global CCS Institute, an industry group, acknowledges that "private investors will be very unlikely to bear" leakage risks at CO<sub>2</sub> storage sites after their closure, proposing that "there needs to be a system of laws and policies whereby the liability is transferred from the private sector investor to government."<sup>9</sup>

The State of Louisiana has already socialized this long-term liability. Under the Geologic Sequestration of Carbon Dioxide Act of 2009, ten years after cessation of CO<sub>2</sub> injection in a given reservoir (or "any other time frame established"), the state assumes all liability for future leakages or accidents to the extent adequate funds are available in Louisiana's Carbon Dioxide Geologic Storage Trust Fund.<sup>10</sup> This could leave Louisianans to bear the costs of any and all accidents which may happen into perpetuity.

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<sup>7</sup> Adriano Vinca, Johannes Emmerling, and Massimo Tavoni, "Bearing the Cost of Stored Carbon Leakage," *Frontiers in Energy Research*, 15 May 2018, [www.frontiersin.org/articles/10.3389/fenrg.2018.00040/full](http://www.frontiersin.org/articles/10.3389/fenrg.2018.00040/full).

<sup>8</sup> Loi Hoan Huy Phouc Pham, Risza Rusli, and Lau Kok Keong, "Consequence Study of CO<sub>2</sub> Leakage from Ocean Storage," *Procedia Engineering*, Volume 18, 2016, [www.sciencedirect.com/science/article/pii/S1877705816310669](http://www.sciencedirect.com/science/article/pii/S1877705816310669).

<sup>9</sup> Global CCS Institute, "Unlocking private finance to support CCS investments," 2021 Thought Leadership report, [www.globalccsinstitute.com/wp-content/uploads/2021/06/Unlocking-Private-Finance-for-CCS-Thought-Leadership-Report-1.pdf](http://www.globalccsinstitute.com/wp-content/uploads/2021/06/Unlocking-Private-Finance-for-CCS-Thought-Leadership-Report-1.pdf).

<sup>10</sup> House Bill 571 (2023), introduced by Speaker Clay Schexnayder (R-Gonzales), would extend this window to 50 years, among other changes.

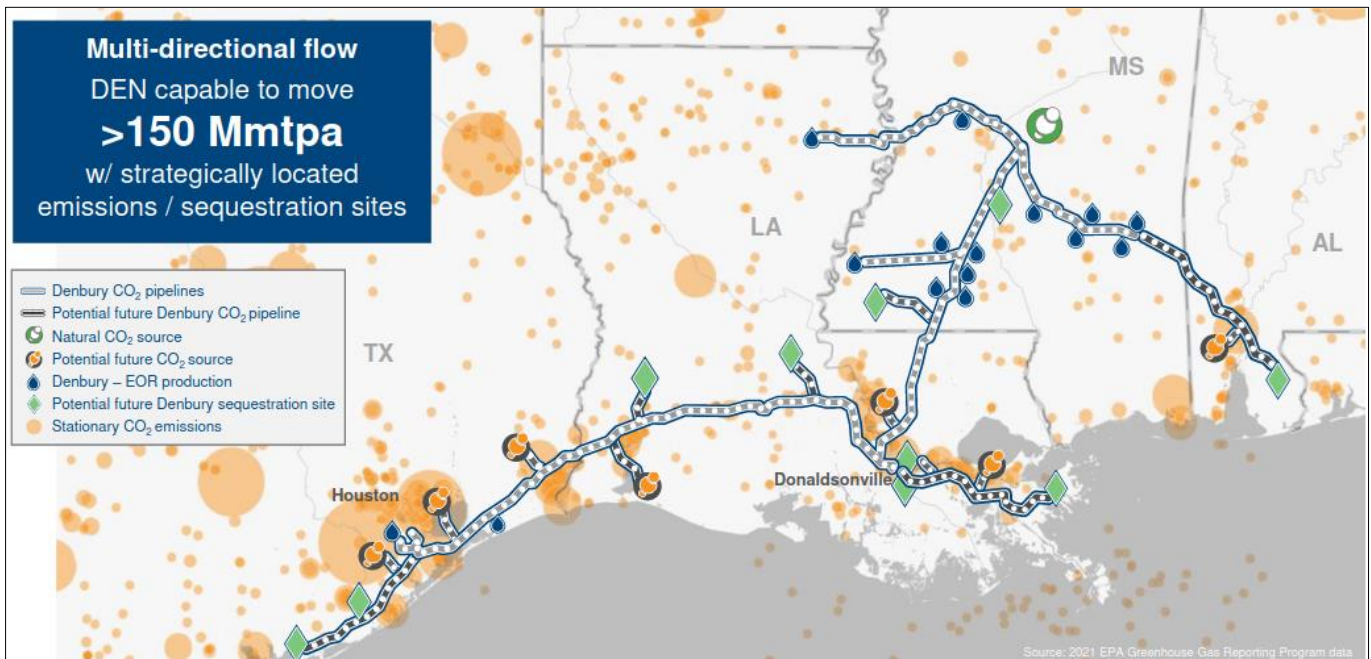
## CO<sub>2</sub> PIPELINE BUILD-OUT

Pipeline transportation capacity is emerging as a systemic constraint on the development of CCS projects. While there are only some 5,000 miles of CO<sub>2</sub> pipeline currently operational in the United States, a 2022 Congressional Research Service report estimates that 66,000 miles may be necessary by 2050, requiring some 170 billion USD in new capital investment.<sup>11</sup>

In Louisiana, only two companies have well-developed plans for CO<sub>2</sub> pipeline networks. One of those, Denbury (NYSE:DEN), which is also developing the largest network of permanent sequestration sites in Louisiana, stands out as a key early mover in the space. Denbury has aggressive expansion plans and a head start, due to its existing CO<sub>2</sub> pipeline network for enhanced oil recovery. It has signed multiple transportation and storage agreements and is negotiating more with emitting facilities throughout the state. The company claims that its networked model of pipelines and multiple sequestration hubs along the Gulf Coast, from Texas to Alabama — including at least four planned sites in Louisiana — allows for more efficient transportation and storage of CO<sub>2</sub> at scale, from multiple customers, for both permanent sequestration and enhanced oil recovery. Denbury characterizes this as a "subway" model, where CO<sub>2</sub> can be piped into and out of its pipeline network in discrete segments, as opposed to the "point-to-point" model of integrated CCS projects.

Denbury has CO<sub>2</sub> sequestration deals amounting to about 20 million tonnes per annum (mtpa) in total, 18 mtpa of which are in Louisiana — far more than any other competitor — and claims to be negotiating an additional 55 mtpa. Approximately half of the projects currently in negotiations are "greenfield" (new development), while the others are "brownfield" (existing emitters).<sup>12</sup>

**Figure 1 — Denbury's existing and planned Gulf Coast CO<sub>2</sub> infrastructure**



Source: Denbury, December 2022

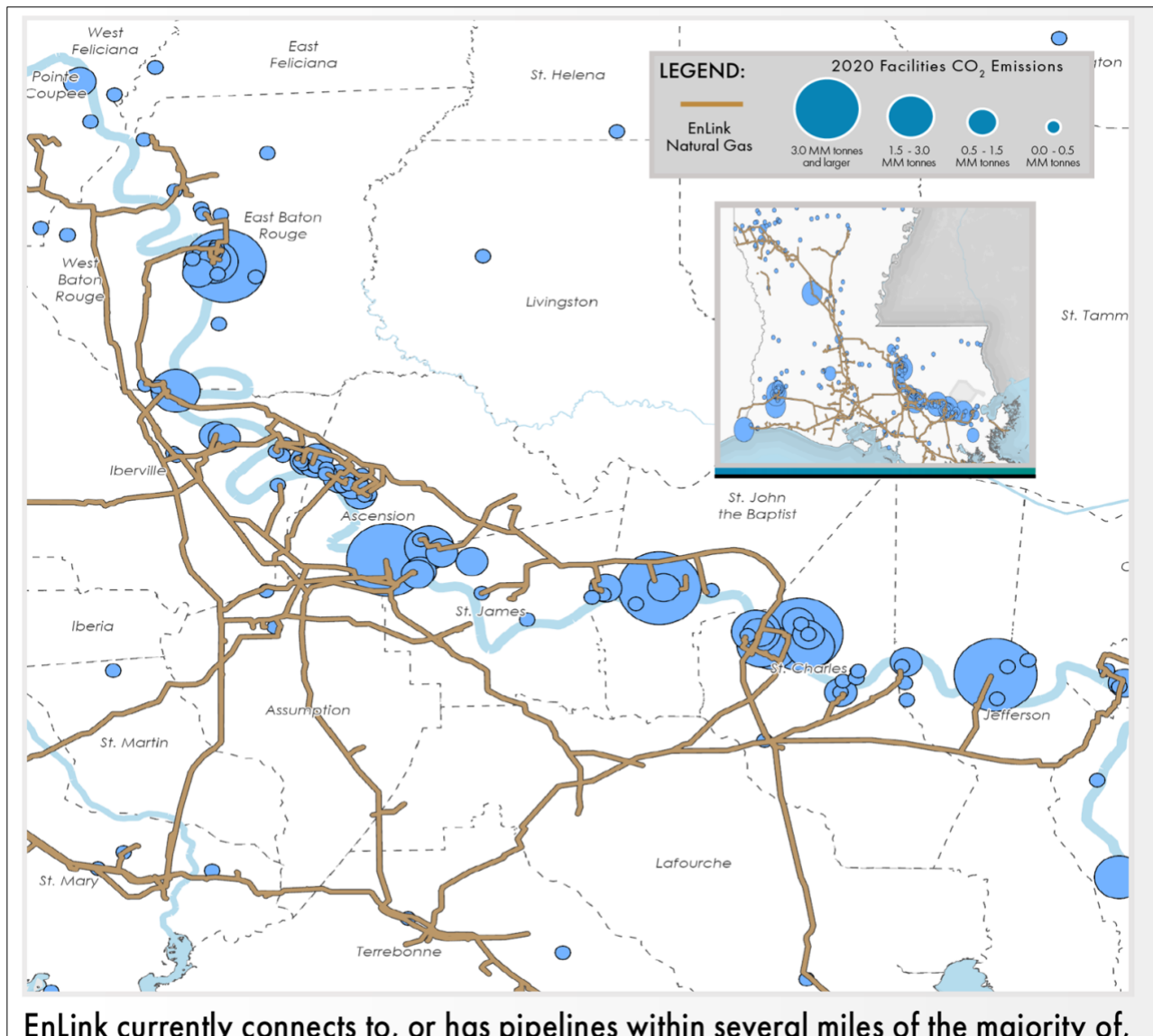
<sup>11</sup> Congressional Research Service, "Carbon Dioxide Pipelines: Safety Issues," 3 June 2022, [crsreports.congress.gov/product/pdf/IN/IN11944](https://crsreports.congress.gov/product/pdf/IN/IN11944)

<sup>12</sup> Denbury, Q3 2022 earnings call.

The only other company with plans for networked CO<sub>2</sub> pipelines in Louisiana is EnLink Midstream (NYSE:ENLC), whose existing assets are primarily natural gas pipelines. EnLink has already signed CO<sub>2</sub> transportation deals with several oil majors, thus positioning itself for a major role in regional CCS deployment.

However, the physical properties of compressed CO<sub>2</sub> differ significantly from those of natural gas,<sup>13</sup> for which most of Enlink’s existing infrastructure, operations, and safety protocols were designed. Regulators, the affected public, and investors — including institutional investors such as the Teachers Retirement System of Louisiana, which is currently invested in the private equity fund that owns EnLink — should be aware of the unique dangers of a CO<sub>2</sub> pipeline build-out and how those dangers differ from the natural gas pipelines with which they may be more familiar.

**Figure 2 — EnLink Midstream's natural gas pipeline infrastructure**



Source: EnLink Midstream

<sup>13</sup> Energy Equipment & Infrastructure Alliance, "Meeting the Dual Challenge: A Roadmap to At-Scale Deployment of Carbon Capture, Use, and Storage," 22 January 2020, [www.eeia.org/post/CCUS-Pipeline-Transport-Meeting-the-Dual-Challenge.pdf](http://www.eeia.org/post/CCUS-Pipeline-Transport-Meeting-the-Dual-Challenge.pdf).

## PRIVATE INSURANCE, PUBLIC LIABILITY

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Regulatory agencies require CCS developers in Louisiana to secure various types of financial assurance during permitting and development. In considering insurance coverage for CCS in Louisiana, it is important to note that the state's Geologic Sequestration of Carbon Dioxide Act of 2009 transfers much of the risk to the public sphere over time. Ten years after cessation of CO<sub>2</sub> injection in a given reservoir, Louisiana will issue a certificate of completion to the operator, after which all subsequent liability is transferred to the State unless there are inadequate funds in Louisiana's Carbon Dioxide Geologic Storage Trust Fund, which was established in 2018.

This transfer of liability to the public would compound potential environmental and public health impacts that local communities have denounced in response to plans for major CO<sub>2</sub> storage reservoirs under bodies of water.<sup>14</sup> Air Products (NYSE:APD) has signed pore space agreements with the State of Louisiana for storage beneath Lake Maurepas and Lake Sabine; ConocoPhillips is developing pore space under or adjacent to Lac des Allemands; ExxonMobil is developing pore space between White Lake and the Gulf of Mexico; Venture Global LNG is planning two offshore storage locations in Cameron Parish and Plaquemines Parish; and Denbury has plans for a major storage reservoir underneath the Biloxi Marsh.

As it concerns the existing, time-limited framework for private insurance, the most important requirements come from the EPA, for Class VI injection well permits, and the Louisiana Department of Natural Resources (LDNR), as a condition of carbon dioxide sequestration agreements signed with the state or private parties for underground storage. One insurance broker for CCS operators recommends a "two-policy approach" that should cover most requirements:<sup>15</sup>

- A surety bond for the EPA's Corrective Action and Injection Well Plugging financial responsibility requirement, "as that market routinely issues bonds for indefinite terms on long life plugging obligations and has a tenured history in this field of underwriting from the oil & gas space."
- Third party insurance, specifically a pollution insurance policy, for liability damages requirements, which "would address the 3<sup>rd</sup> party damages section for bodily injury, property damage and off-site cleanup costs, including emergency response and remediation cost," such as in the case of an accidental CO<sub>2</sub> release.

In a phone call, an insurance broker explained that some insurers have begun to work on a policy to cover risk related to 45Q tax credits, in the event that a company does not receive as much federal money as anticipated based on preliminary CO<sub>2</sub> capture estimates. These policies are designed for "capturing parties" that are eligible for the tax credit, as opposed to Class VI injection well developers, though these are sometimes the same companies.

At the federal level, the EPA has financial responsibility requirements that are part of the Class VI well permitting process for geologic sequestration of CO<sub>2</sub> in order to comply with the Safe Drinking Water Act. This requires projects to provide proof of a financial instrument, which can be a trust fund, escrow account, surety bond, letter of credit, or insurance, for "Corrective Action on Deficient Wells, Plugging Injection Well Post-Injection, Site Care

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<sup>14</sup> Jacqueline DeRobertis, "Livingston Parish imposes year-long moratorium on injection wells, pausing carbon capture efforts," *The Advocate*, 8 September 2022, [www.theadvocate.com/baton\\_rouge/news/environment/livingston-parish-imposes-year-long-moratorium-on-injection-wells-pausing-carbon-capture-efforts/article\\_913e8740-2fae-11ed-bd50-4bf62bd72d8c.html](http://www.theadvocate.com/baton_rouge/news/environment/livingston-parish-imposes-year-long-moratorium-on-injection-wells-pausing-carbon-capture-efforts/article_913e8740-2fae-11ed-bd50-4bf62bd72d8c.html).

<sup>15</sup> CAC Specialty, "Class VI Financial Assurance - Surety & Insurance," [cacspecialty.com/wp-content/uploads/2022/01/Class-VI-Financial-Assurance-White-Paper.pdf](http://cacspecialty.com/wp-content/uploads/2022/01/Class-VI-Financial-Assurance-White-Paper.pdf).

and Site Closure" and "Emergency and Remedial Response." Developers can provide evidence of self-insurance by demonstrating their financial condition,<sup>16</sup> but this is highly unusual, according to the insurance broker consulted.

Class VI permit applicants must provide updated cost estimates in their Financial Responsibility Demonstration documents. At the state level, LDNR also requires proof of financial responsibility for Class VI well projects to be submitted to its Office of Conservation, which has jurisdiction over geologic sequestration and issues a certificate of public convenience for sequestration projects.<sup>17</sup>

Furthermore, CCS project developers are required to submit proof of insurance under the terms of Carbon Dioxide Sequestration Agreements signed with the State Mineral and Energy Board, which is located at LDNR and responsible for leasing state lands. Carbon dioxide storage agreements are currently in place for CCS projects that involve state land with Air Products Blue Energy (three agreements), Capio Sequestration (two agreements), Venture Global CCS Plaquemines, and Venture Global CCS Cameron.<sup>18</sup> The standard language in these agreements stipulates proof of insurance of up to 2 million USD for bodily injury, 2 million USD for property damage, and 10 million USD for environmental damage. A nearly identical Carbon Dioxide Storage Agreement was identified among Parish Clerk documents for a CCS project on land leased from a private owner, with the same financial assurance stipulations.<sup>19</sup>

Public records requests answered by EPA and LDNR show a wide range of companies have begun to provide CCS-related policies, as seen in Table 1.

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<sup>16</sup> U.S. Environmental Protection Agency, "Geologic Sequestration of Carbon Dioxide: Underground Injection Control (UIC) Program Class VI Financial Responsibility Guidance," July 2011, [www.epa.gov/sites/default/files/2015-06/documents/uicfinancialresponsibilityguidancefinal072011v.pdf](http://www.epa.gov/sites/default/files/2015-06/documents/uicfinancialresponsibilityguidancefinal072011v.pdf).

<sup>17</sup> Louisiana Department of Natural Resources, "Carbon Sequestration at the Louisiana Office of Conservation," Presentation, 21 July 2022, [www.dnr.louisiana.gov/assets/OC/im\\_div/uic\\_sec/2022SonristoSunset/ClassVIatPipelineSafetyConference7-10-22.pdf](http://www.dnr.louisiana.gov/assets/OC/im_div/uic_sec/2022SonristoSunset/ClassVIatPipelineSafetyConference7-10-22.pdf).

<sup>18</sup> Louisiana Office of Mineral Resources, Special Notices and Announcements, [www.dnr.louisiana.gov/index.cfm/page/168](http://www.dnr.louisiana.gov/index.cfm/page/168). See also: Louisiana Administrative Code, Title 43, Natural Resources Part XVII, Injection and Mining Subpart 6, Statewide Order No. 29-N-6, [www.dnr.louisiana.gov/assets/OC/im\\_div/uic\\_sec/43v17\\_2021.pdf#page=149](http://www.dnr.louisiana.gov/assets/OC/im_div/uic_sec/43v17_2021.pdf#page=149).

<sup>19</sup> Carbon Dioxide Sequestration Agreement between River Bend CCS and Bowie Lumber Associates.



**Table 1 — Insurance policies for certain Louisiana CCS projects**

Project	Insurer	Insurer Parent	Policy	Amount (USD)
Air Products Blue Hydrogen	ACE American Insurance Company	Chubb Ltd. (NYSE:CB)	Commercial General Liability	2,000,000
	SiriusPoint Specialty Insurance Corporation	SiriusPoint Ltd.(NYSE:SPNT)	Pollution Legal Liability	10,000,000
Air Products & Chemicals	ACE American Insurance Company	Chubb Ltd. (NYSE:CB)	Commercial General Liability	2,000,000
Venture Global CCS Cameron	Starr Indemnity & Liability Company	Starr International Company, Inc. (private)	Commercial General Liability	2,000,000
	Allianz Underwriters Ins Co	Allianz SE (XTRA:ALV)	Pollution Legal Liability	10,000,000
Venture Global CCS Plaquemines	Starr Indemnity & Liability Company	Starr International Company, Inc. (private)	Commercial General Liability	2,000,000
	Interstate Fire & Casualty Co	Allianz SE (XTRA:ALV)	Pollution Legal Liability	10,000,000
Capiro Sequestration	Underwriters at Lloyds of London	Society of Lloyd's (private)	Commercial General Liability	2,000,000
	Underwriters at Lloyds of London	Society of Lloyd's (private)	Pollution Legal Liability	10,000,000
Gulf Coast Sequestration	Ascot Specialty Insurance Company	Canada Pension Plan Investment Board	Emergency and Remedial Response	No data
	Endurance Assurance Corporation	Sompo Holdings (TSE:8630)	Corrective Action on Deficient Wells, Plugging Injection Well Post-Injection, Site Care and Site Closure	No data

Sources: EPA and LDNR via public records requests.

Public records requests were also submitted to the Louisiana Department of Environmental Quality (LDEQ) for any proof of insurance submitted by CCS project developers. LDEQ requires water quality certification and air permits for CCS projects, though these permits do not have a financial assurance requirement for CO<sub>2</sub> sequestration, and application documents received from the agency in response to records requests do not suggest otherwise.

Locally, parish development permits are also required for CCS projects, but these do not generally entail direct financial assurance of much significance for the issuance of permits. One St. James Parish permit administrator consulted for this report noted that the Parish requires contractors to undertake a contractor registration process, which "assures that contractors have state licenses and insurances needed. But as far as obtaining the actual permit from my office, we do not ask for insurance."<sup>20</sup> Cameron Parish, meanwhile, does require a Road Surety Bond for light commercial development permits if construction will involve road travel over the 10-ton load limit,<sup>21</sup> but such minor considerations are not a significant liability risk for CCS projects compared to federal and state financial assurance requirements.

CCS insurance is a new addition to the fossil fuel industry's liability concerns, but major insurers have responded rapidly. In the words of one industry executive, "18 months ago, nobody in the insurance industry was talking about [CCS]," but "today there is an insurance product that is workable and affordable," though insurance offerings will continue to evolve.<sup>22</sup>

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<sup>20</sup> Email exchange with Amber Shephard, St. James Parish Planning & Permitting Manager, December 2022.

<sup>21</sup> Cameron Parish, "Checklist for Commercial & Light Industrial Development," [cameronpj.org/wp-content/uploads/2022/11/New-Commercial-Checklist.pdf](https://cameronpj.org/wp-content/uploads/2022/11/New-Commercial-Checklist.pdf).

<sup>22</sup> Denbury, "Carbon Capture, Utilization, and Storage (CCUS) Business Outlook," Investor call and presentation, 13 December 2022, [investors.denbury.com/investors/events-and-presentations/events/event-details/2022/CCUS-Business-Outlook-Virtual/default.aspx](https://investors.denbury.com/investors/events-and-presentations/events/event-details/2022/CCUS-Business-Outlook-Virtual/default.aspx).

## CONCLUSION

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For the oil companies and other investors behind CCS projects, risk is a financial matter. The Global CCS Institute characterizes key risks as three-fold:<sup>23</sup>

- Policy and revenue risk (the industry's primary revenue source is taxpayer money);
- Cross-chain risk (projects depend on a complex integration of emissions capture, pipeline transport, and underground storage); and
- Storage liability (for underground CO<sub>2</sub> leakage).

These financial risks are the reason that commercial banks have largely avoided CCS projects thus far. To cover the related environmental risks, if only partially, regulatory agencies require private-sector insurance. This report documents that a wide range of companies have begun to provide CCS-related policies in Louisiana, including subsidiaries of some of the world's largest insurers, such as Allianz, Society of Lloyd's, Chubb, and Sampo Holdings.

However, CCS projects present local communities with other, uninsurable risks. The potential health effects of contaminated groundwater or public safety emergencies due to pipeline explosions are not necessarily encapsulated in insurance policies. Financial compensation does not reverse water contamination nor heal potential injuries. Companies may be able to cover such impacts with legal settlements — Denbury will soon be facing a number of lawsuits over the Mississippi disaster,<sup>24</sup> in addition to the PHMSA settlement — but they are not mere externalities given the vast and rapid scale of development, currently planned.

By design, CCS requires the public to absorb the bulk of risk associated with this unproven technology, whether through federal taxpayer subsidies or long-term pollution liability transfer to the State of Louisiana. In areas such as the industrial corridor between Baton Rouge and New Orleans, this new technology will only add one more layer, literally and figuratively, to potential sources of environmental pollution, whether through underground CO<sub>2</sub> leaks or new pipeline construction.

Taken together, the risks to the public, state and local governments, and investors in the event of disasters warrant additional scrutiny. Denbury, in particular, with its uniquely important position in both CO<sub>2</sub> transportation and storage, warrants public scrutiny in light of the company's safety record. The CO<sub>2</sub> pipeline explosion in Mississippi that led to evacuations, hospitalizations, ongoing community impacts, and a record-setting PHMSA disciplinary process do not bode well for a massive expansion in pipeline capacity through the Baton Rouge and New Orleans metropolitan areas.

As a precautionary measure, legislators might reasonably support legislative action to ensure that the State of Louisiana would not assume liability for CO<sub>2</sub> accidents after injection ceases, as is currently the case. The adoption of such legislative changes would ensure that project owners and operators — together with their insurers — bear the full financial responsibility in the event of accidents.

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<sup>23</sup> Global CCS Institute, "Unlocking private finance to support CCS investments," 2021 Thought Leadership report, [www.globalccsinstitute.com/wp-content/uploads/2021/06/Unlocking-Private-Finance-for-CCS-Thought-Leadership-Report-1.pdf](http://www.globalccsinstitute.com/wp-content/uploads/2021/06/Unlocking-Private-Finance-for-CCS-Thought-Leadership-Report-1.pdf).

<sup>24</sup> Dan Zegart, "The Gassing Of Satartia," *HuffPost*, 26 August 2021, [www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline\\_n\\_60ddea9fe4b0ddef8b0ddc8f](http://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f).

## DATA SOURCES

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Research for this report builds on findings published in two prior publications on CCS project development and financing in Louisiana.

Once an initial list of projects was compiled, public records requests were submitted for all project application documents filed with the Louisiana Department of Environmental Quality (LDEQ) and the Department of Natural Resources (LDNR), which are responsible for various CCS permitting procedures. In particular, all proof of financial assurance submitted for CCS projects was specifically requested of LDEQ, LDNR, and EPA according to the terms of agency requirements.

Federal and state litigation documents were obtained from the PUBLIC ACCESS TO COURT ELECTRONIC RECORDS (PACER) service and the eClerks LA platform. Insurance brokers and regulatory agency representatives were consulted for clarity on existing CCS insurance products and requirements.