

# Eight Reasons to Oppose CO<sub>2</sub> Pipelines

## Why Carbon Pipelines?

With the passage of the Infrastructure Investment and Jobs Act (IIJA, 2021) and the Inflation Reduction Act (IRA, 2022), the federal government is making billions of dollars available to private corporations to capture and store greenhouse gas emissions from power plants and other industrial sources. This requires transporting high-pressure, liquified carbon dioxide many miles from the industrial source to the site of storage, where it will be injected deep underground.



The Illinois Basin region which covers most of Illinois, southwestern Indiana, and western Kentucky with a storage capacity ranging between 12 billion to 172 billion metric tons of CO<sub>2</sub>. Source: Prairie Research Institute. November 2020.

Geologists have determined that the Mt. Simon Sandstone Formation in the Illinois Basin provides one of the best locations for permanently sequestering carbon. That is why private companies have targeted, and will continue to target, this geologic formation for the storage location for their projects.

Supporters of carbon storage, transport, and sequestration note that CO<sub>2</sub> has been transported via pipeline for decades. Existing pipelines generally transport CO<sub>2</sub> from a sole source to an endpoint, which may be an oil field where the CO<sub>2</sub> is pumped underground in a process called “enhanced oil recovery” to force more oil in spent fields to the surface.

Many of the projects that have been proposed in response to the lucrative tax credits available through the IIJA and IRA are more complex. The first CO<sub>2</sub> pipeline construction request to the Illinois Commerce Commission (ICC) was part of a network nearly 1,350 miles long that would cross South Dakota, Nebraska, Minnesota, and Iowa before entering Illinois.

Such a network would require managing a high-pressure network of CO<sub>2</sub> pipelines, with numerous sources feeding into multiple off-take stations and injection wells. Some industrial sources may be located in populated areas. The properties of CO<sub>2</sub> under pressure make it impossible to ensure safety in such an area. These projects are not the same as previous CO<sub>2</sub> pipelines.

## Why Oppose CO<sub>2</sub> Pipelines?

CO<sub>2</sub> pipelines are part of a larger system that includes carbon capture and storage. If the goal of carbon capture is to remove it from the atmosphere, then the entire process must be assessed for emissions. Carbon capture requires *more* energy to power the equipment and can increase emissions, while continuing to spew health-harming pollutants into the atmosphere. CO<sub>2</sub> is an asphyxiant that can kill humans and animals if a pipeline leaks or ruptures, depending on the length of exposure. And, there are no guarantees that the carbon sequestered will remain permanently stored underground.

There are many reasons why carbon pipelines, carbon capture and storage are not a good idea. Here are eight:

### #1. CO<sub>2</sub> Pipelines Aren't Safe

In order to transport the carbon dioxide via pipeline, it must be liquified under pressure three times the rate of natural gas. CO<sub>2</sub> pipelines can, and do, rupture or leak. When this occurs, an explosive plume of CO<sub>2</sub> gas can erupt that can travel a mile or more. Because it is an asphyxiant that is heavier than air and can accumulate in low-lying areas, the CO<sub>2</sub> plume can suffocate all living beings, and prevent internal combustion engines in gas-powered vehicles from starting, making escape and rescue difficult or impossible.

A February 2020 CO<sub>2</sub> pipeline rupture in Mississippi required the evacuation of more than 200 people and put 45 in the hospital. While no one died, many experienced life-threatening symptoms, and emergency responders had difficulty rescuing people. (Read “[The Gassing of Satartia](#)” (Huffington Post, August 2021.)

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## #2. Eminent Domain

The Illinois Commerce Commission will grant eminent domain if they approve a CO<sub>2</sub> pipeline, and landowners will have no say over whether a carbon pipeline company can build through their property. This is particularly true in Illinois, because the state has adopted the [Carbon Dioxide Transportation and Sequestration Act](#). As currently written, the Act establishes carbon capture as a public good, a key criterion for enabling eminent domain.

The Illinois Commerce Commission may consider landowner objections to the pipeline based on safety, if many intervene in the ICC proceedings. For that reason, landowners should **NOT SIGN A VOLUNTARY EASEMENT** at this time. Doing so will waive future rights.

## #3. Few Regulations Exist for CO<sub>2</sub> Pipelines

Carbon pipelines are dangerous and under-regulated:

- CO<sub>2</sub> is an asphyxiant that can travel large distances at lethal concentrations from the pipeline after a rupture.
- CO<sub>2</sub> pipelines are prone to ductile fractures which, like a zipper, open up and run down a significant length of the pipe, while releasing immense amounts of CO<sub>2</sub>, hurling large sections of pipe, and generating enormous craters.
- A small amount of water in a CO<sub>2</sub> pipeline allows the formation of carbonic acid which can corrode the pipeline, causing a leak or rupture.

After investigating the CO<sub>2</sub> pipeline rupture near Sartoria, Mississippi, the Pipeline Hazardous Materials and Safety Administration (PHMSA) announced a rule-making process to improve safety and oversight of CO<sub>2</sub> pipelines. No projects should be considered before the rule-making is complete.

## #4. Damages to Topsoil and Reduced Crop Yield.

Productivity of cropland can be negatively affected by construction. A [2021 Iowa State University](#) study of pipeline construction impacts associated with the Dakota Access Pipeline found “extensive soil disturbance from construction activities had adverse effects on soil physical properties, resulting from the mixing of topsoil with backfill brought in for filling pipeline trenches; and soil compaction from heavy machinery.”

These impacts can discourage root growth and reduce water infiltration. The research team found:

***“Crop yields in the right-of-way were reduced by an average of 25% for soybeans and 15% for corn during the first and second crop seasons, compared to undisturbed fields.”***

## #5. Construction of CO<sub>2</sub> Pipelines On the Rise

[Section 45Q](#) of the Internal Revenue Code provides tax credits on a per-ton basis to companies that successfully trap, sequester and store carbon emissions, preventing them from entering the atmosphere. In August of 2022, the Biden Administration’s Inflation Reduction Act increased these credits from \$60 to \$85 a ton for carbon stored underground, further accelerating the “mad dash” to build pipelines for corporate profit.

There are currently 5,300 miles of CO<sub>2</sub> pipelines in this country. But projections from Princeton University indicate there could be as many as 66,000 miles of CO<sub>2</sub> pipelines built across the country to meet the demand for carbon capture and sequestration, accelerating impacts and risk.

## #6. For Landowners, It's All Risk and No Reward

Private corporations profit from carbon capture and sequestration via federal tax credits and low-interest loans. Landowners take all the risk, with little to no reward. While they are compensated initially for the use of their land, payments from pipeline companies do not begin to approach those that are received from wind or solar located on their farmland. Such renewable energy technologies either power a farm, residence, commercial / industrial property or feed into the grid. Or, if the land is leased by a solar or wind developer, landowners are paid annually in long-term, revenue-sharing agreements.

## #7. Pipelines Extend the Life of Fossil Fuels

Instead of spending money to deploy renewable energy technologies more rapidly, billions of federal dollars are being spent to keep the fossil fuel industry in business. This is particularly true for projects that involve “enhanced oil recovery,” which puts more carbon into the atmosphere when it is burned. We need to keep fossil fuels in the ground to order to meet critical climate targets.

## #8. Carbon Capture and Storage Hasn't Worked

Despite extensive public subsidies, [80% of the projects](#) that have attempted to commercialize carbon capture and sequestration technology have ended in failure. Between 2005 and 2012, the Department of Energy spent \$6.9 billion attempting to demonstrate the feasibility of CCS for coal, but [less than 4%](#) of the planned CCS capacity was ever deployed.

Why use taxpayer dollars to fund a CO<sub>2</sub> pipeline system for a technology that has such a poor track record? Plus, there is no proof that the carbon sequestered will remain permanently stored. The greenwashing that calls out CCS as a viable climate solution is setting dangerous policy by diverting funds from technologies that we know work.