Carbon Capture and Storage (CCS) captures carbon dioxide (CO_2) from industrial sources before it enters the atmosphere. The CO_2 is compressed, transported via pipeline, and injected underground. Despite billions in taxpayer subsidies, CCS has failed and poses serious health and safety risks to communities.

WHY ILLINOIS? WHY NOW?

Illinois is a target for storage

- Illinois is targeted for CCS due to the Mt. Simon Sandstone Formation, which some geologists claim can trap CO_2. The formation's large storage capacity also makes it attractive for carbon capture and storage.
- However:
  - CO_2 can leak through wells, or fissures and fractures in the caprock.
  - Migration risks water contamination.
  - There is no guarantee of permanent storage.

Taxpayer subsidies have increased

- The IRS 45Q tax credit incentivizes the permanent storage of CO_2 and for enhanced oil recovery (EOR), which extracts difficult to access oil:
  - The Inflation Reduction Act increased the credit for permanent storage by 70%.
  - 80-90% of all carbon captured is used for EOR, which releases more CO_2 when oil is burned.
- 45Q subsidizes the fossil fuel industry while private investors gain windfall profits.

CCS POSES RISKS TO COMMUNITIES

Carbon capture affects EJ communities

- Carbon capture increases emissions of NOx, SOx, and particulate matter, worsening air quality.
- Many industrial facilities are located in low income or minority communities already burdened by pollution, compounding environmental injustice.

CO_2 pipelines are dangerous

- CO_2 is a toxic asphyxiant. A pipeline rupture can spread a lethal plume of CO_2 over two miles, displacing oxygen.
- In 2020 a CO_2 pipeline failed in Satartia, MS, sending 45 people to the hospital and evacuating over 200.

CO_2 pipelines are under-regulated

- After Satartia, the Pipeline and Hazardous Materials Safety Administration (PHMSA) announced it would improve safety and oversight of CO_2 pipelines.
- PHMSA released its recommended rule, but it has been withdrawn for review by the Trump administration.
- PHMSA is prohibited from addressing safe routing. To date, Illinois authorities also have declined to do so.

CO_2 can escape confinement

- CO_2 can escape along injection or monitoring wells, abandoned wells, or through cracks in the caprock.
- CO_2 leaks into aquifers can create carbonic acid, leaching toxic metals into drinking water. Leaks to the surface can release CO_2 back into the atmosphere.
- ADM's two monitoring wells leaked just seven years after the company began injecting CO_2. One of their wells corroded and was taken out of production. The reason behind the second leak has not yet been released.

Earthquakes can fracture the caprock

- Natural or induced earthquakes can damage wellbores or fracture the caprock, creating pathways for CO_2 to escape confinement.
- Injecting CO_2 can induce earthquakes, similar to oil and gas wastewater injection which has caused earthquakes as high as 5.0M in TX and 5.8M in OK.
- Brittle rocks commonly found in continental interiors are particularly susceptible to induced earthquakes. This includes the Mount Simon Sandstone Formation.

CCS JEOPARDIZES LOCAL RESOURCES

Carbon capture increases power costs

- CCS requires 13-44% more energy, increasing electricity costs by 25-50%.
- Canada's Boundary Dam, the only operating electrical generating station in North America with carbon capture installed, captures just 50% of CO_2 released, but has doubled electricity rates for ratepayers.

Carbon capture is water intensive

- CCS increases water use by up to 55% for each capture site. Much of this is used for cooling.
- Prairie State CCS would consume more daily water than the 113,000 residents of Springfield, Illinois.
- Illinois lacks water-use regulations, risking shortages during times of drought.

CO2 PIPELINES AND STORAGE THREATEN PROPERTY RIGHTS

CO_2 pipelines and eminent domain

- Pipelines threaten property rights through the use of eminent domain, and 82% of people polled in Illinois oppose its use by private companies for private gain.
- Pipeline construction also significantly reduces crop yield. Some acreage never returns to full productivity.
- Eminent domain was never meant to be used to take away landowner rights or public health and safety for private gain.

Carbon storage and integration

- Carbon storage projects threaten landowners' property rights, both inside and outside the project area.
- A process called integration will force nonconsenting landowners to accept CO_2 storage once 75% of the landowners agree to a project.
- In Illinois, CO_2 that moves beyond the modeled project area is not considered a trespass. Landowners outside that project area are forced to accept storage.

CCS IS INEFFECTIVE AND WASTES TAXPAYER DOLLARS

CCS hasn't worked

- The Department of Energy (DOE) has invested billions of dollars in CCS technology over the past 15 years.
- Despite this massive funding, 13 U.S. flagship storage projects failed or never were constructed. The few actually completed have underperformed significantly.

Good for industry but not for climate

- Except for direct air capture, CCS does not remove carbon from the atmosphere. At its best, it prevents CO_2 from reaching the atmosphere.
- Enhanced oil recovery boosts oil production but intensifies the climate crisis.
- A DOE report indicates that if CCS were to be fully deployed, 45Q could generate between $1.1 and $3.8 trillion in tax credits for industry by 2050.
- Considering the costs, limitations, and failures of CCS, the billions invested in this technology could have been better allocated to targeted solutions, such as energy efficiency, renewables, reforestation, and assisting farmers in restoring soil health by enhancing carbon capture and storage in the soil.

Taxpayer funded, but not transparent

- Projects lack tracking systems to confirm CO_2 is permanently stored or used for EOR.
- No 45Q clawbacks are required if CO_2 leaks (as it did at ADM's Decatur facility).
- The risk of fraud is real, as multiple companies could potentially claim 45Q tax credits for the same CO_2 that is captured and stored.
- 45Q tax credits are claimed on private tax returns, which prevents public scrutiny.

ACT TODAY!

Tell Illinois leaders to reject CCS expansion and protect land, public safety, and taxpayer dollars.

For more information, visit:
NoIllinoisCO2Pipelines.org