

Urgent Need for Strong Federal Safety Standards for CO2 Pipelines

May 14, 2025

Chairman Ted Cruz and Ranking Member Maria Cantwell
Senate Committee on Science Commerce and Transportation
254 Russell Senate Office Building
Washington DC, 20510

Chairman Sam Graves and Ranking Member Rick Larsen
House Committee on Transportation and Infrastructure
2165 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Cruz, Ranking Member Cantwell, Chairman Graves and Ranking Member Larsen:

We write on behalf of public interest, environmental justice, Indigenous, landowner, and community organizations from across the country to urge Congress to include strong, enforceable protections for communities, first responders, and landowners as part of the upcoming reauthorization of the Pipeline and Hazardous Materials Safety Administration's (PHMSA) pipeline safety programs. The carbon capture industry is planning a rapid expansion of carbon dioxide (CO2) pipelines, while lacking a safety and regulatory framework that matches the scale and risks these hazardous systems pose to communities.

Communities across the country are facing projects that raise grave concerns about public safety, landowner rights, and federal oversight gaps. The 2020 Satartia, Mississippi pipeline rupture and the 2024 Archer Daniels Midland CO2 injection well failure in Illinois have made it clear that existing federal protections for the carbon capture industry are wholly inadequate. The [Federal investigation](#) into the Satartia incident revealed critical failures in CO2 plume modeling leading to inadequate community awareness, emergency response and evacuation procedures, among other concerns, as the industry tries to expand across the country with inadequate safety measures in place. More recently, the Environmental Protection Agency (EPA) [flagged serious concerns about well integrity](#) of the ADM sequestration project because of corrosion due to the presence of contaminants like water in the CO2 stream and the limitations of commonly used steel in pipelines and injection wells.

PHMSA had developed updated safety standards that were made publicly available in January of this year but were rescinded prior to publishing in the Federal Register. The now-rescinded draft [Notice of Proposed Rulemaking](#) represented an important acknowledgment of these risks, but it fell short of what is needed to fully protect people, property, and the environment. We urge Congress to act where federal regulators are failing to address serious safety risks and move forward by incorporating the following recommendations into any pipeline safety reauthorization.

General Pipeline Safety

- **Stop the statutory cost-benefit requirement that mandates prioritizing pipeline company profits over the safety of communities.** This analysis is not easy to quantify, especially for public harms, such as impacts of pipeline ruptures or explosions on tourism, wildlife, public health, property values, and other factors that create a serious risk of undervaluing these impacts.
- **Require operators to include geohazard mitigation in their inspection and maintenance plans.** There have been a number of recent, serious pipeline failures due to land movement and other geological hazards. Operators are not currently required to mitigate against geohazards outside of High Consequence Areas, increasing risks for less populated rural communities. If Congress is committed to zero incidents, safety standards need to address the risk of geohazards such as land movement, river scouring, and other geologic threats to pipeline integrity.
- **Require that pipeline construction companies refrain from hiring any employees or contractors who have been convicted of a sex offense or domestic violence.** Sex trafficking is shown to markedly increase along pipeline construction routes and particularly threatens rural and Indigenous communities.
- **Update the definition of “carbon dioxide” to include gaseous and liquid CO₂.** The current definition of “carbon dioxide” in the federal pipeline safety regulations does not apply to all CO₂ pipelines that may be developed for CCS projects, leaving an enormous regulatory gap.

Community Emergency Response and Preparedness

- Congress must require pipeline operators to notify all units of government and any structure owner and occupants within a **minimum 2 miles impact area of a proposed or existing CO₂ pipeline, considering that** CO₂ can travel long distances after a rupture and is deadly when concentrated.
- Congress must **require pipeline operators to develop comprehensive emergency response plans with all members of the public in the 2 mile impact area — including** first responders, community organizations, Indigenous communities, landowners, businesses — *prior* to the permitting of a pipeline. These plans would determine when and how people should evacuate, identify evacuation routes, and outline plans for monitoring, and distribution of personal protection equipment if necessary. Pipeline operators must make the emergency response plans easily accessible to the public and remind those in the impact area annually about the plans. Operators must consider updates to these plans in consultations with those in the impact area every two years.
- Congress must **require pipeline operators to fund ongoing safety training, equipment updates, and planning for local first responders** who would engage in CO₂ pipeline-related emergencies, prior to and during all pipeline operations.

Pipeline Construction Standards, Monitoring and Leak Detection,

- Congress must mandate the use of **Chrome 25 or higher grade steel** to withstand corrosion from CO₂. The presence of water in CO₂ pipelines can cause corrosion of lower grade steel the industry currently uses to construct pipelines.
- Congress must **require the development and deployment of a CO₂ odorant** for all pipelines. Since CO₂ is odorless and colorless, inclusion of an odorant in CO₂ streams would allow the public and responders to identify a leak before causing mass harm
- Congress must require Operators to install **continuous monitoring equipment** with sufficient frequency to detect a 5% of maximum flow leak within 15 minutes, with real-time data transmission to central control rooms to address leaks quickly. Additionally, rupture mitigation valves must be placed with a maximum distance that does not exceed 7 1/2 -miles for pipeline segments that could affect or are in High Consequence Areas, enabling immediate isolation of leak segments and minimizing harm.
- Congress must require **monitoring and reporting of all substances injected into CO₂ pipelines**, especially corrosive compounds such as water and hydrogen sulfide. There are significant concerns about how these substances interact with pipeline materials and increase the risk of failure. Without clear standards, pipelines will continue to carry unknown threats to public safety.
- Congress must require PHMSA to develop a regulatory system requiring operators to **fully track and account for carbon dioxide through the entire system**, from entry to exit. A safe pipeline system keeps its contents in the pipeline and an operator should prove that the system is not leaking CO₂.
- Congress must direct PHMSA to **prohibit the conversion of existing pipelines to CO₂ service**, because of pipeline materials integrity concerns described above. Additionally, CO₂ pipelines for other uses must not be utilized for anything besides CO₂, even if properly decommissioned.

Landowner Rights and Financial Protections

- Congress **must not authorize PHMSA or any other federal agency to fast track CO₂ pipelines** through federal route permitting programs, which override community concerns. This authority must remain with state and local governments.
- Congress should **require pipeline operators to carry adequate insurance** that fully indemnifies landowners and other property users in the event of an incident.
- Pipeline operators must post **financial bonds sufficient to cover decommissioning, cleanup, and long-term monitoring** once a pipeline is taken out of service.

CO₂ pipelines present unique and serious hazards that existing federal laws and regulations fail to address. As Congress considers reauthorization of PHMSA's programs, we urge you to adopt strong standards that prioritize public safety, landowner rights, and environmental integrity. Federal policy must keep pace with this expanding industry and the risks it brings.

Sincerely,

Alliance for Affordable Energy
Better Brazoria: Clean Air & Water
Between the Waters
Bold Alliance
Center for International Environmental Law
Center for Progressive Reform
Center on Race, Poverty & the Environment
Climate Reality Project Chicago Metro Chapter
Citizens Against Predatory Pipelines
Coalition to Stop CO2 Pipelines
CURE
Dakota Resource Council
Don't Gas the Meadowlands Coalition
Earth Ethics, Inc.
Earthjustice
Earthworks
Eco-Justice Collaborative
Elders Climate Action
Extinction Rebellion PDX
Food & Water Watch
Fox Valley Citizens for Peace & Justice (Illinois)
Friends of the Earth
Greater Highland Area Concerned Citizens
Greater New Orleans Interfaith Climate Coalition
GreenLatinos
Healthy Gulf

Houston Climate Movement
Indigenous Environmental Network
Institute for Agriculture and Trade Policy
Institute for Policy Studies Climate Policy Program
Interfaith Climate Action of Contra Costa County
Iowa Citizens for Community Improvement
Iowa Unitarian Universalist Witness/Advocacy Network, IUUWAN
League of Conservation Voters
Long Beach Alliance for Clean Energy
Micah Six Eight Mission
Ní Btháska Stand Collective
NorCal Elder Climate Action
North American Climate, Conservation and Environment(NACCE)
Northern Plains Resource Council
Nuclear Information and Resource Service
Occupy Bergen County
Oil and Gas Action Network
PACAN
Physicians for Social Responsibility
Physicians for Social Responsibility Pennsylvania
Protect PT
Public Goods Org
San Francisco Bay Physicians for Social Responsibility
SanDiego350

Santa Cruz Climate Action Network

Save Our Illinois Land

Science and Environmental Health Network

Sovereign Iñupiaq for a Living Arctic (SILA)

Stand.earth

Sunflower Alliance

Turtle Island Restoration Network

Unitarian Universalists for a Just Economic
Community

Washington Physicians for Social
Responsibility

Waterkeeper Alliance

WE ACT for Environmental Justice

West Virginia Rivers Coalition

Western Organization of Resource Councils

Wild Idaho Rising Tide

350 Bay Area Action

350 Eugene

350 Seattle

350.org