GREAT PLAINS INSTITUTE

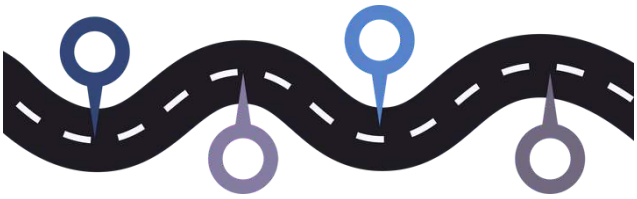
TEXAS CARBON MANAGEMENT ROADMAP

DEVELOPED BY THE **GREAT PLAINS INSTITUTE** WITH SUPPORT FROM
CYNTHIA AND GEORGE MITCHELL FOUNDATION

WHY A ROADMAP?

Texas is at a turning point. Surging power demand, massive investments in hydrogen and ammonia, and the first wave of carbon-management projects are rapidly reshaping the state's industrial landscape. With deep energy expertise, world-class geology, and newly secured Class VI primacy, giving the state direct, streamlined oversight of carbon storage, Texas is built to seize this moment.

The Roadmap, developed by the Great Plains Institute (GPI), provides an overview of Texas's carbon management landscape and outlines practical, near-term actions that support safe, competitive, and well-coordinated deployment. As interest in carbon management increases, agencies, industry, communities, and workforce partners will be asked to make decisions across permitting, infrastructure planning, safety, economic development, and long-term investment. The Roadmap serves as a starting point for discussion as these groups consider regulatory needs, identify economic opportunities, and prepare for long-term infrastructure development.



WHY CARBON MANAGEMENT?

With more than 850 industrial facilities and over 360 MMt CO_2 emitted annually, Texas has one of the strongest business cases for carbon management in the country. These technologies help major Texas industries central to the state's economy, including natural gas, refining, chemicals, cement, ammonia, petrochemicals, manage emissions while keeping operations competitive.

Scaling carbon management protects Texas's leadership in energy and industrial production, drives billions in new investment, and supports high-quality jobs. Modeling shows the state could capture and store hundreds of MMt of CO_2 by midcentury with supportive policies

THE PROCESS

Research

GPI compiled technical, economic, and policy information on Texas's capture, removal, transport, storage, and utilization opportunities. Modeling from Carbon Solutions informed near-term and midcentury build-out scenarios.

Stakeholder engagement

Nearly 100 stakeholders across industry, government, academia, labor, nonprofits, and community organizations contributed expertise through roundtables, in-person events, and one-on-one discussions to refine recommendations.

Draft Roadmap

GPI integrated research, modeling, and stakeholder insight to develop recommendations on permitting, regulatory clarity, workforce readiness, safety, incentives, and community engagement.

Review process

The draft was circulated for multi-stage review across six weeks to ensure accuracy, feasibility, transparency, and alignment with Texas-specific needs and context.

Share

Reach out to Emma Thomley (ethomley@gpisd.net) at GPI for resources to help share and communicate key information about the Roadmap across your networks.

LEARN MORE ABOUT OUR WORK AT
CARBONCAPTUREREADY.BETTERENERGY.ORG

TEXAS CARBON MANAGEMENT ROADMAP RECOMMENDATIONS

What steps support safe, economical, and responsible, deployment?

CARBON CAPTURE	Establish a policy council, support continued federal investment in 45Q, modernize and expand state incentives, create state grant and revolving loan programs, commission statewide economic studies, develop a technology-neutral Energy Attribute Certificate framework, integrate into regional water planning, study air quality and health co-benefits, advocate for federal permitting clarity, monitor TCEQ permitting capacity, evaluate natural gas with carbon capture as a clean firm power resource
DIRECT AIR CAPTURE	Conduct feasibility assessments for waste-heat pairing and ensure DAC is eligible for carbon management incentives.
HYDROGEN & CARBON MANAGEMENT	Support federal 45V credit, expand hydrogen eligibility across Texas Emissions Reduction Plan programs, task the Texas Hydrogen Production Policy Council with advancing incentives, convene the Council to support export opportunities, provide public education, strengthen hydrogen safety and emissions standards, and explore produced water opportunities.
CARBON TRANSPORT	Incorporate recommended CO_2 pipeline safety practices and expand public awareness and safety outreach in regions where new CO_2 pipeline development is expected.
CARBON UTILIZATION	Conduct statewide market and policy assessment and support university-industry pilots including CO_2-derived sustainable aviation fuel.
CARBON STORAGE	Participate in training programs, increase RRC funding and staffing for Class VI reviews, clarify Class VI permitting timelines, include undocumented well surveys in applications, monitor Seismic Response Areas, expand induced-seismicity educational resources, and consider a long-term liability transfer framework.
COMMUNITY ENGAGEMENT	Increase communication on permitting, develop a centralized carbon management information hub, define significant public interest in air permitting, establish ongoing communication requirements for capture projects, expand public access to CO_2 pipeline information, increase engagement opportunities in Class VI processes, promote best practices for engagement, and support community benefit agreements and plans.
WORKFORCE DEVELOPMENT	Conduct statewide manufacturing workforce analysis, map regional workforce strengths and gaps, establish carbon management apprenticeship programs, create a workforce advisory council, offer reskilling grants, and leverage the Texas Skills Development Fund.