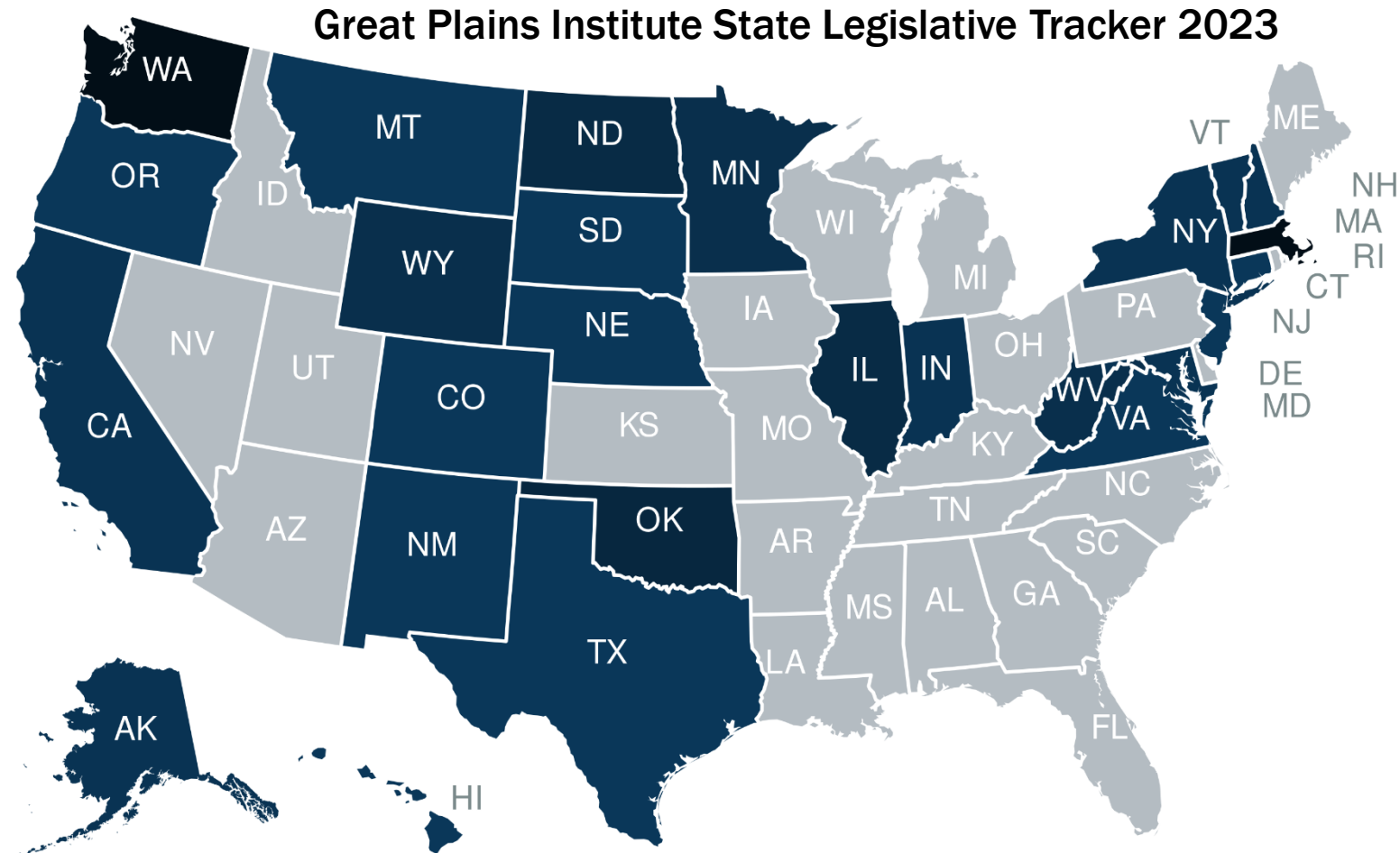


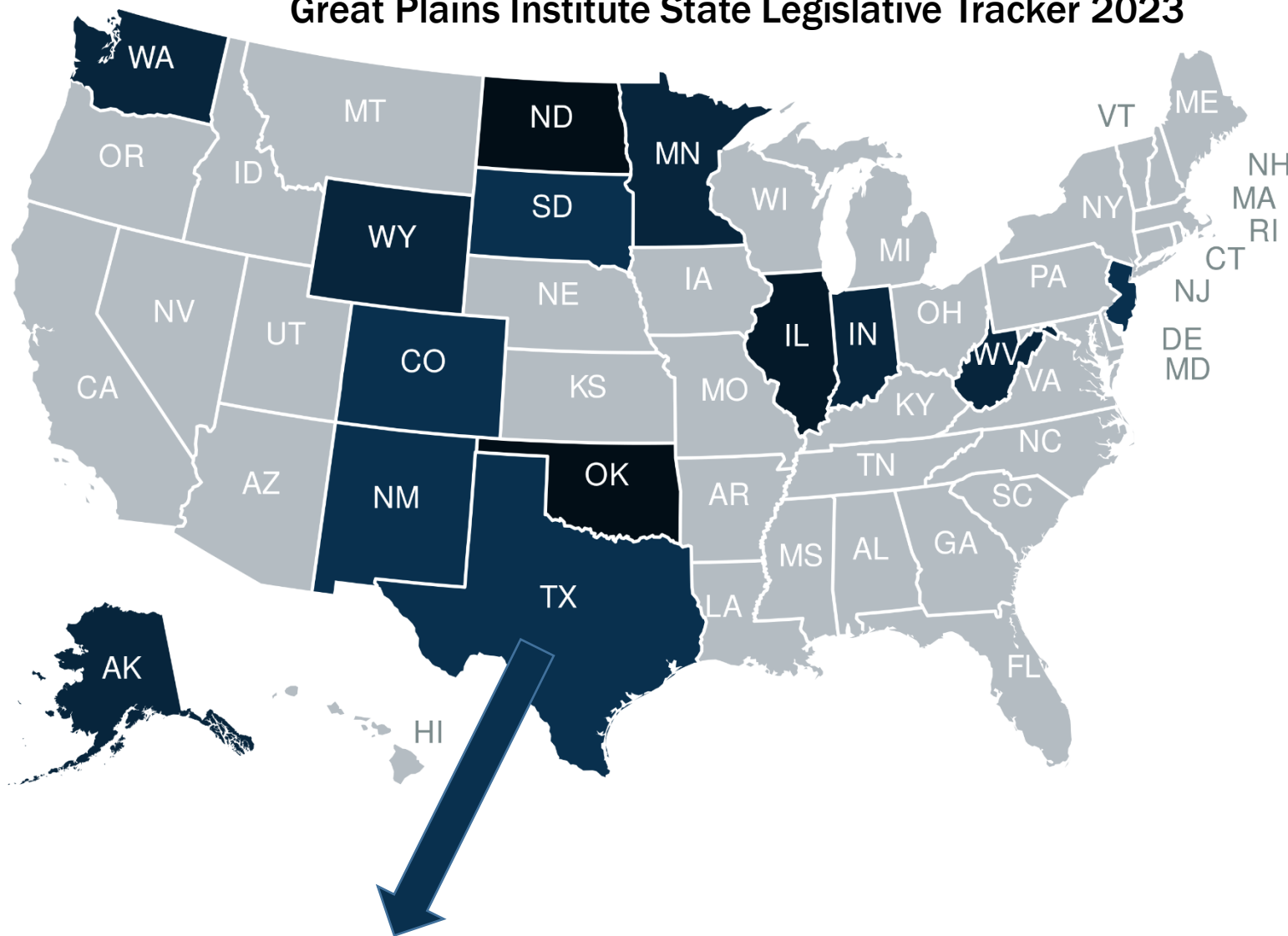
# CCS Status Update

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**Bureau of Economic Geology**

**State legislative sessions are underway in 2023 in most states across the country and more than 70 carbon management, hydrogen, and procurement-related measures and bills of interest are under consideration.**



States shaded to  
right have one or  
more active bills on  
**carbon  
management**



**TEXAS - H.B. 1158:** Relating to advanced clean energy projects and certain other projects that reduce or eliminate carbon dioxide emissions. Eliminates ‘99% sequestered for at least 1000 years’ language in Health and Safety Code.

**H.B. 4225**

**S.B. 2107**

State	Minimum Number of Years Before Transfer of Liability	Statute
Montana	50 <sup>11</sup>	Mont. Code Ann. §82-11-183(3)(f)
Wyoming	20	Wyo. Stat. Ann. §35-11-319(b)
North Dakota	10	N.D. Cent. Code §38-22-17(4)
West Virginia	10	W. Va. Code §22-11B-12
Louisiana	10	La. Stat. Ann. §30:1109
California	100	Ca. Pub. Res. Code §71464
Utah	10	Utah Code §40-11-16



## Texas

Texas is home to the energy capital of America, hundreds of large industrial emissions sources ripe for carbon-capture retrofitting, and easy access to numerous geologic formations capable of permanently storing large amounts of CO<sub>2</sub> safely. Moreover, Texas has the highest concentration of energy companies with institutional knowledge and experience relating to carbon capture, including with respect to projects that require capturing carbon, drilling injection wells, and deploying carbon-capture technology at scale. To capitalize on the state's head start and geographic advantages, the Texas Legislature has passed comprehensive carbon-capture legislation and taken several steps to obtain Class VI primacy from the EPA.

Issue	Description	Authority
Regulatory Authority	The Texas Railroad Commission has jurisdiction and authority to enforce laws relating to the injection and geologic storage of CO <sub>2</sub> .	Tex. Admin. Code §5.201 <i>et seq.</i> ; Texas Water Code §27.047; Tex. Health & Safety Code §382.506
CO <sub>2</sub> Ownership and Liability (Onshore)	Unless otherwise provided by contract or other legally binding document, or by other law, CO <sub>2</sub> stored in a geologic storage facility is considered the property of the storage operator. It is not considered the property of the owner of the surface or mineral estate.	Tex. Nat. Res. Code §121.002
Pore Space Ownership	Unclear due to conflicting case law.	
Class VI Primacy	Not granted. The EPA is the primary enforcement authority. The Texas Railroad Commission has been granted authority to seek Class VI primacy.	Tex. Water Code §27.048
Mineral Rights Primacy	A permit for injection and geologic storage may be issued only if it is shown that the injection and geologic storage of CO <sub>2</sub> will not endanger any oil, gas or other mineral formation.	Tex. Water Code §27.051
Storage Fund	The Anthropogenic Carbon Dioxide Storage Trust Fund is a special fund created to cover long-term monitoring and remediation of CO <sub>2</sub> injection and storage sites. The fund consists of application fees (\$50,000/application), an annual fee (\$50,000/yr), and an injection fee (\$.025/ton of CO <sub>2</sub> ). The fund is statutorily capped at \$5 million.	Tex. Nat. Res. Code §121.003; Tex. Admin. Code §5.205
EOR	Requirements and regulations relating to injection of CO <sub>2</sub> for the purpose of EOR are distinct from requirements and regulations relating to injection of CO <sub>2</sub> for other purposes.	Tex. Admin. Code §5.301
Permits	An operator may transfer its geologic storage facility permit to another party if specific requirements are met.	Tex. Admin. Code §5.202(c)
Offshore	The commissioner of the land office shall contract with the University of Texas Bureau of Economic Geology to identify potential locations for offshore CO <sub>2</sub> repositories. The School Land Board will make the final determination on suitable location, contract for creation of suitable infrastructure, issue fees, and set rules for monitoring and verification.	Tex. Health & Safety Code §382.503-506
	The School Land Board will acquire title to CO <sub>2</sub> stored in CO <sub>2</sub> repositories on a determination by the board that permanent storage has been verified and that the storage location has met all applicable state and federal requirements for closure of CO <sub>2</sub> storage sites.  On the day the permanent school fund acquires the right, title and interest in CO <sub>2</sub> , the producer of the CO <sub>2</sub> is relieved of liability.	Tex. Health & Safety Code §382.507

**Notable Legislation:** H.B. No. 1796 (2009); S.B. No. 1387 (2009); H.B. No. 1284 (2021)

## Louisiana

Louisiana has a long history of carbon-capture operations for enhanced oil recovery operations. As a result, the state has developed one of the most extensive networks of pipeline infrastructure in the country to meet carbon transportation needs. Louisiana is also home to numerous coal and gas power plants, gas processing facilities, petroleum refineries, chemical plants, and other industrial facilities that may be prime candidates for carbon retrofit based on emissions and estimated capture cost. To capitalize on these conditions, the Louisiana Legislature passed the Louisiana Geologic Sequestration of Carbon Dioxide Act to govern future deployment of CCUS throughout the state.

Issue	Description	Authority
Regulatory Authority	The commissioner of conservation is granted jurisdiction and authority to enforce laws relating to the geologic storage of CO <sub>2</sub> and subsequent withdrawal of stored CO <sub>2</sub> . Approval of a storage facility by the commissioner requires notice and public hearing.	LSA-R.S. 30:1102-1111
CO <sub>2</sub> Ownership and Liability	A certificate of completion may not be issued until at least 10 years after CO <sub>2</sub> injections end. Upon issuance of the certificate, the storage operator, all generators of any injected CO <sub>2</sub> , all owners of CO <sub>2</sub> stored in the storage facility, and all owners otherwise having any interest in the storage facility, shall be released from any and all duties, obligations, or liability.	LSA-R.S. 30:1109(A)(1)
Pore Space Ownership	Ownership of the pore space is presumed to be vested in the surface estate owner(s).	Common Law
Class VI Primacy	Not granted. The EPA is the primary enforcement authority. Once primacy is granted, the state regulations that will govern Class VI wells can be found in Statewide Order No. 29-N-6.	
Storage Fund	The Carbon Dioxide Geologic Storage Fund has been established to fund operational and long-term inspecting, testing, and monitoring of CCUS sites as well as remediation, plugging and abandoning, repairs, and general administration.  The fund shall consist of fees, penalties, and bond forfeitures collected in connection with permitting, private contributions, the contents of site-specific trust accounts (to be used only for each respective site) and fees levied by the commissioner on storage operators. The amount of such fees is determined according to a formula (F x 144 <M) that establishes the fee per ton of CO <sub>2</sub> over the course of at least 144 months, not to exceed \$5 million.	LSA-R.S. 30:1110
EOR	Use of CO <sub>2</sub> for enhanced hydrocarbon recovery requires the creation of a unit by the commissioner of conservation for the purpose of secondary or tertiary recovery. A hearing is required before permission is granted.	LSA-R.S. 30:5(C).
Eminent Domain	Storage operators and owners that obtain a certificate of public convenience and necessity from the commissioner may exercise the power of eminent domain over property to acquire surface and subsurface rights and property interests necessary for the purpose of constructing, operating, or modifying a storage facility.  A certificate of public convenience and necessity may be issued only after a public hearing.	LSA-R.S. 30:1108  LSA-R.S. 30:1107

**Notable Legislation:** H.B. 661 (2009); H.B. 1220 (2008)

## 24 CARBON MANAGEMENT BILLS – Active March 2023

S.B. 49: CARBON STORAGE	Alaska
H.B. 50: CARBON STORAGE	Alaska
SB23-016: Greenhouse Gas Emission Reduction Measures	Colorado
S.B.1916: Util-Moratorium Co2 Pipe	Illinois
H.B.2202: Underground Co2 Storage Act	Illinois
S.B.0451: Carbon sequestration pilot project.	Indiana
S.B.0247: Carbon sequestration.	Indiana
H.F.1314: Carbon storage contract provisions prohibited.	Minnesota
H.F.342: Carbon capture and sequestration technology state policy established.	Minnesota
H.B. 174: Underground Injection Fund	New Mexico
S.B. 2383: Relating to the carbon dioxide pipeline tax exemption; and to provide an effective date.	North Dakota
S.B. 2212: Relating to eminent domain and carbon dioxide pipelines; and to declare an emergency.	North Dakota
S.B. 2209: Relating to eminent domain and carbon dioxide pipelines; and to declare an emergency.	North Dakota
S.B.19: Carbon capture technologies; requiring energy produced from certain sources be considered carbon neutral or carbon negative in certain circumstances. Effective date.	Oklahoma
S.B.200: Carbon sequestration; requiring certain state agencies to compile and submit certain report to certain state officials by specified date. Emergency.	Oklahoma
S.B.852: Carbon sequestration; modifying agency jurisdiction. Effective date.	Oklahoma
H.B.1133: define a commodity for the purpose of qualifying as a common carrier.	South Dakota
H.B. 1158: Relating to advanced clean energy projects and certain other projects that reduce or eliminate carbon dioxide emissions.	Texas
S.B. 2107: Relating to ownership of pore space, transfer of long-term liability, and lease integration	Texas
H.B. 4225: Life Cycle Analysis CCS	Texas
S.B.162: Authorizing director of DNR to lease state-owned pore spaces in certain areas for carbon sequestration	West Virginia
S.B.161: Authorizing DNR to manage and dispose of property	West Virginia
S.F.0142: Carbon capture and sequestration.	Wyoming
H.B.0193: Carbon capture energy standards-repeal.	Wyoming

# Example: IN SB 247

- An **Indiana Senate committee** voted down a bill that would have required local government approval of carbon capture and sequestration projects, calling it an “extra level of bureaucracy.”
- Members of the Senate Committee on Environmental Affairs voted down the passage of **Senate Bill 247**, which would have required the approval of counties, cities or towns in order to move forward on carbon capture and sequestration projects, in a 4 to 7 vote.
- The bill was supported in committee by the **Association of Indiana Counties**, which said local input was needed to gauge support for a potential project carbon dioxide storage project in Benton County.

# TEXAS RESPONSIBILITY FOR LONG-TERM STORAGE OF CARBON DIOXIDE.

- Sec. 124.003. **APPLICATION FOR TRANSFER OF TITLE AND CUSTODY TO THE STATE** – Certificate of Closure. State has 60 days to respond or approve.
- APPROVAL Conditions:
  - **Waiting period** of at least 10 years after receiving certificate.
    - Commission may require less than a ten-year waiting period under Subsection (b)(1)
  - Operator in **full compliance** (Section 27.047(1) (I))
  - Stored carbon dioxide and geologic storage facility are **stable** and **not expected** to endanger USDW;
  - **Fee** - Section 124.005 – additional per-ton fee into **Trust Fund** for addressing Section 124.003(d)(8)
    - Amount that is commensurate with obligation reasonably expected to be incurred by the state.
- All responsibility and potential liability associated with stored CO<sub>2</sub> and the geologic storage facility is transferred to the state.
- Release from regulatory requirements and liability.
- Release of any remaining performance bond or other financial security.
- **State shall assume responsibility to monitor** until federal government assumes responsibility.



# **TEXAS *INTEGRATION* OF PORE SPACE FOR DEVELOPMENT OF A GEOLOGIC STORAGE FACILITY**

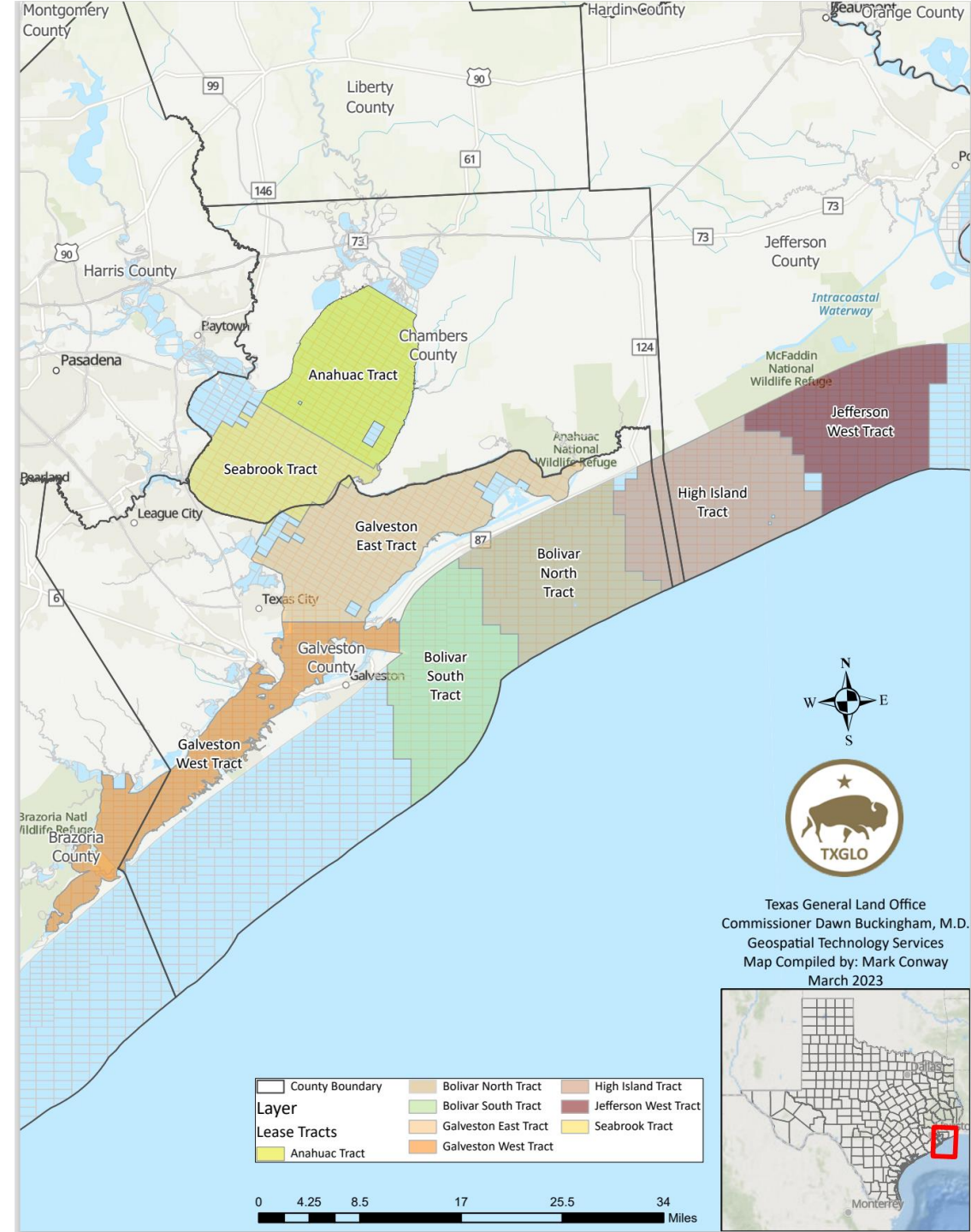
- Protect correlative rights, conserve natural resources, enforce compliance with state and federal law to facilitate and optimize energy resources, including pore space for sequestration.
- Pore space owner may integrate its interests
- Owners who do not agree to integrate – storage operator or pore space owner can file an application with Commission requesting an order for the integration
  - Hearing within 60 days
  - will not endanger or injure any oil, gas, or other mineral formation in any material respect (or has been addressed in arrangement)
  - 60% owner agreement or consent; fair and reasonable offer; equitably compensated for the appurtenant and reasonable use of the pore space and surface.
- **Surface estate is owner of pore space**; Existing relationships between surface and mineral estate unchanged.

# GLO CCS Lease Round 2023

2 geographies, 15 Tracts

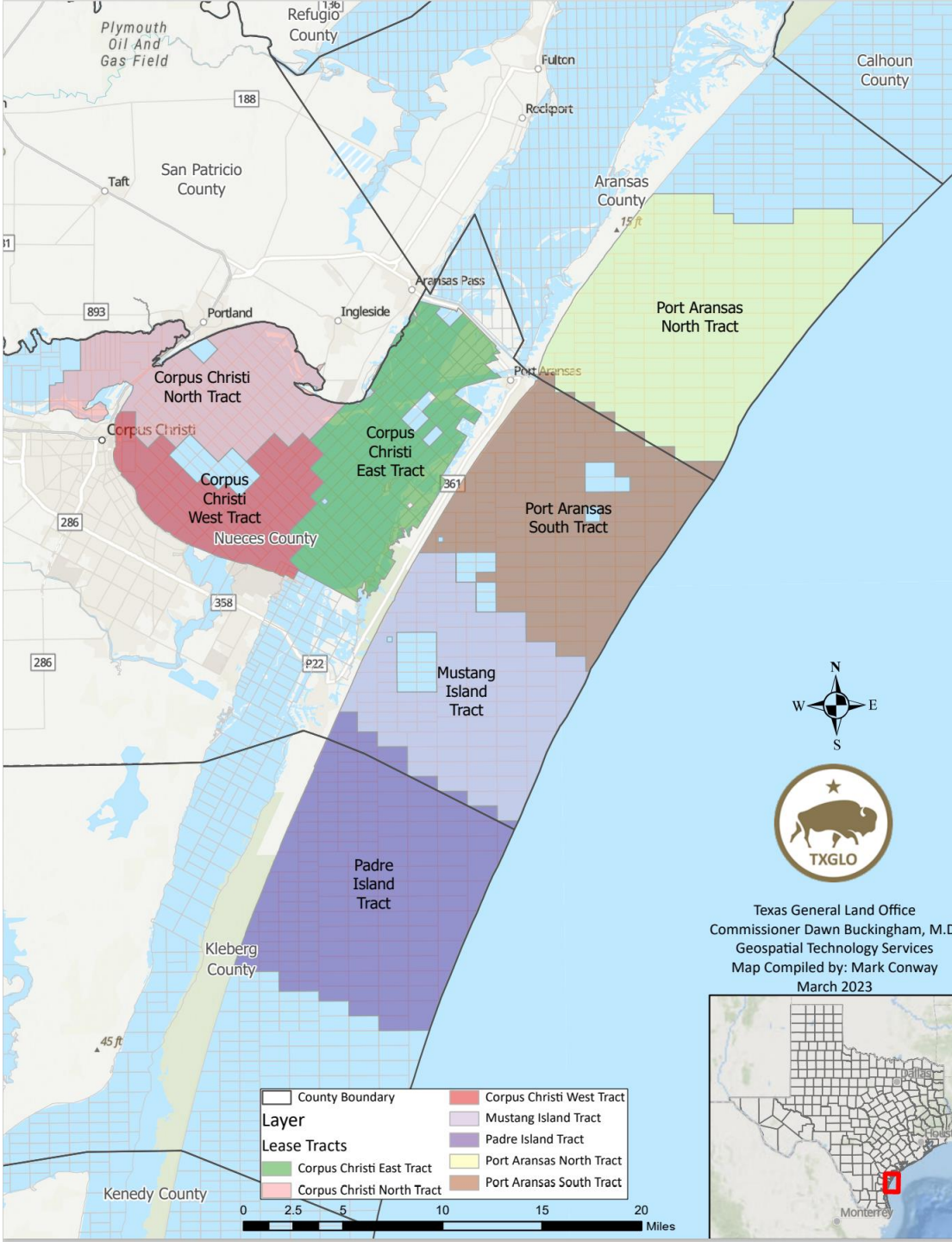
1,091,511 Acres; 1,705 Square Miles

UPPER COAST TRACTS (8)	ACRES	sq mi
Seabrook Tract	60,386	94.4
High Island Tract	100,042	156.3
Jefferson West Tract	85,014	132.8
Galveston West Tract	84,402	131.9
Galveston East Tract	98,546	154.0
Bolivar South Tract	87,718	137.1
Bolivar North Tract	86,014	134.4
Anahuac Tract	77,838	121.6
	Total	1156.8
	Average	128.5
	Minimum	94.4
	Maximum	156.3



COASTAL BEND TRACTS (7)	ACRES	sq mi
Port Aransas North Tract	86,779	135.6
Port Aransas South Tract	68,881	107.6
Mustang Island Tract	56,015	87.5
Padre Island Tract	83,187	130.0
Corpus Christi East Tract	48,272	75.4
Corpus Christi West Tract	27,674	43.2
Corpus Christi North Tract	40,744	63.7

Total	643.1
Average	91.9
Minimum	43.2
Maximum	135.6

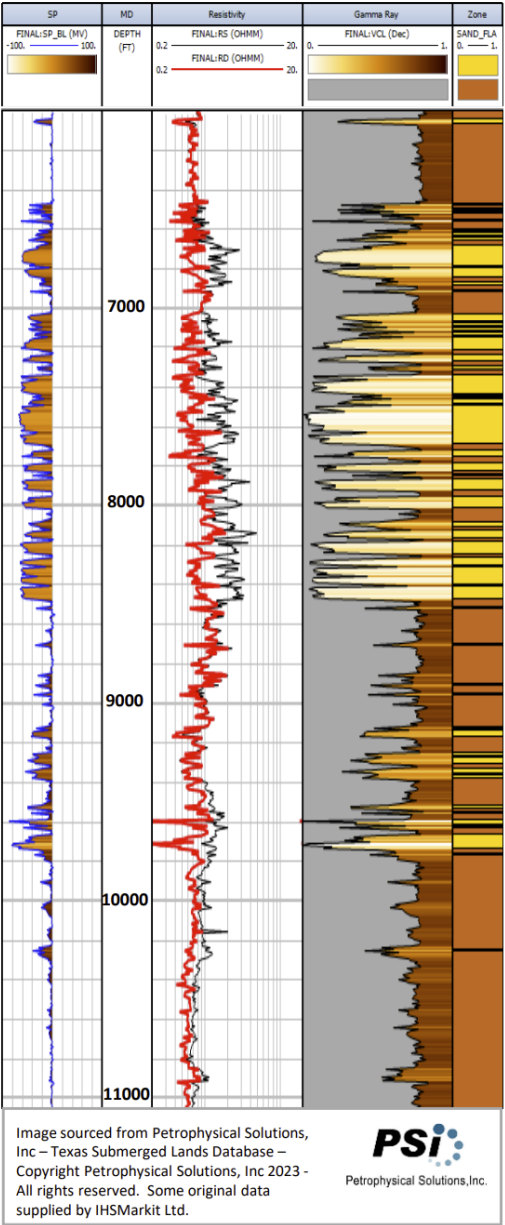
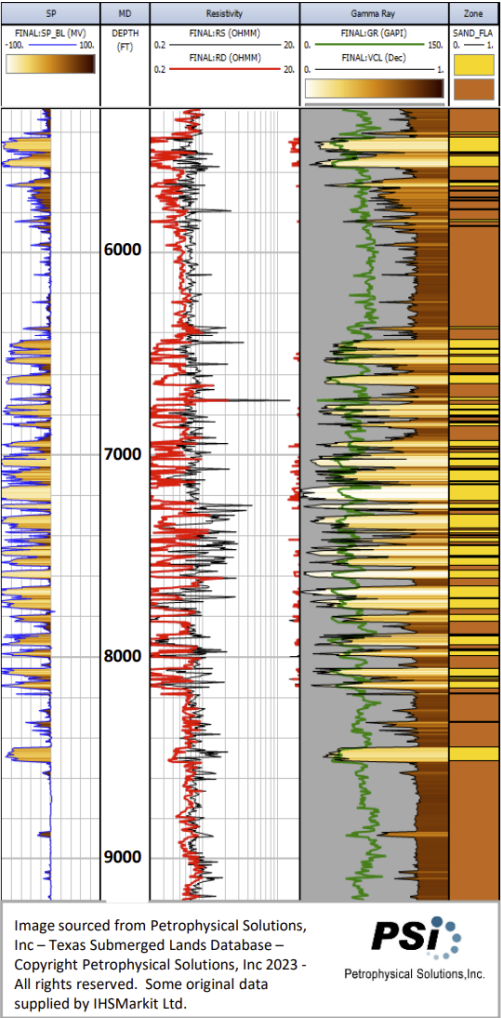




**Relevant Miocene and/or Oligocene Formations**

API# 427063011900

API# 423550611900





# DOE CarbonSAFE Phase 2 - Feasibility

- 9 Onshore: ARI, Battelle, Univ. IL, GTI, POCCA, SSEB, Univ. UT, Univ. ND, Univ. WY.
- 2 Offshore: SSEB, South Timbalier; POCCA + BEG, Corpus Christi