



TxCCSA Executive Summary of Legislation to create the Regulatory Framework for the Geologic Storage of Carbon Dioxide

SB 1387 – Sen. Kel Seliger/Rep. Myra
Crownover

The State of Texas has a growing appetite for power generation capacity. It is a matter of generally accepted wisdom that Texas will use diverse fuel feedstocks and methods to meet or curb the projected energy demand. Furthermore, there will also be a need to reconcile this escalating need for power with sound environmental policies. Carbon Capture and Storage (CCS) is a tool that can reconcile these interests while contributing to energy security through increased domestic production.

The State of Texas leads the world in the technologies of CCS. Over 480 million tons of carbon dioxide has been captured, transported, injected, and stored in connection with the enhanced recovery of oil in Texas.

Although carbon dioxide (CO₂) driven enhanced oil recovery is regulated by the Railroad Commission of Texas (RCT), there is no regulatory framework in Texas for the storage and sequestration of CO₂. As such, entities wanting to capture and sequester CO₂ for long-term storage are left without clear legal guidelines by which to operate. Under the new federal administration, the adoption of federal mandates to regulate greenhouse gases is more likely today than ever. Texas refineries, electric utilities, chemical companies and operators may very well be required to capture and sequester CO₂ under these new rules by as early as 2011.

SB 1387 provides a needed state-level regulatory framework for the storage and sequestration of CO₂. The bill gives the RCT jurisdiction over CO₂ injection wells for “incidental,” and/or “sequential” storage as well as instances where the original well was under the jurisdiction of the RCT. This bill enhances coordination between the RCT and Texas Commission on Environmental Quality to ensure that the regulation of carbon dioxide sequestration in Texas is economical and environmentally sound. S.B. 1387 also requires that rules adopted by the RCT be consistent with rules or regulations adopted by the United States Environmental Protection Agency or another federal agency governing the injection and geologic storage or anthropogenic carbon dioxide.

Finally, SB 1387 calls for two interim studies: one by the Texas General Land Office (GLO) to develop recommendations for managing geologic storage of CO₂ on state-owned lands, including an assessment of storage capacity and new legal and regulatory frameworks that could be necessary based on the GLO recommendations; and another by the RCT and TCEQ in consultation with the Bureau of Economic Geology to study the proper regulation of geologic storage in saline formations not productive of oil, gas or other geothermal resources.

Section by Section Analysis

Section 1

- Definitions section: Defines “Anthropogenic Carbon Dioxide” (ACD) to include CO₂ produced from 1) natural gas sweetening, 2) emissions sources including electric generation facilities, and 3) industrial sources. The term does not include naturally occurring CO₂ used as part of an enhanced recovery operation.
- Further defines “ACD injection well,” “Enhanced recovery operation,” “geologic storage,” “geologic storage facility,” “oil or gas,” “reservoir.”

Section 2 – Jurisdiction, Injection and Geologic Storage of Anthropogenic Carbon Dioxide

- Modifies the Water Code creating Subchapter C-1 of Chapter 27 that gives the Railroad Commission of Texas (RCT) jurisdiction over injection of ACD into a reservoir that is initially or may be productive of oil, gas, or geothermal resource or a saline formation directly above or below that reservoir. Further provides that a well initially completed under the jurisdiction of the RCT shall remain under their jurisdiction, notwithstanding its subsequent use for the injection of ACD.
- Specifies that to the extent the RCT has jurisdiction over saline formations, that jurisdiction is subject to legislative review based on the recommendations from a study to be conducted by the RCT, the TCEQ and the Bureau of Economic Geology.
- Specifies that Subchapter C-1, Water Code does not apply to the injection of carbon dioxide for the primary purpose of enhanced recovery operations.
- Requires a permit from the RCT before the drilling of an ACD injection well or the construction or operation of a geologic storage facility regulated under Subchapter C-1, Chapter 27, Water Code. Directs the RCT to require any information the RCT considers necessary to issue the permit.
- Gives the RCT commission the authority to collect fees for permitting, monitoring, inspecting ACD injection wells and geologic storage facilities and for enforcement.
- Requires the applicant for a permit to the RCT to provide a letter from the TCEQ Executive Director stating that drilling and operating the ACD injection well and geologic storage facility will not injure underground freshwater and that the formation to be used for the GSF is not freshwater. The TCEQ is required to develop rules to implement and administer this section. In making the assessment required by the letter,

the ED must review certain plans and documents submitted with the application for permit.

- Requires the RCT to adopt rules to administer regulate and enforce requirements pertaining to the injection and geologic storage of CO₂, including rules for the following functions:
 - Geologic site characterization, including acquisition of property rights
 - Area of review and corrective action
 - Well construction
 - Operation of CO₂ injection wells and geologic storage facilities
 - Mechanical integrity of CO₂ injection wells
 - Monitoring of facilities
 - Well plugging
 - Post injection site care and site closure
 - Long-term stewardship
- Gives the RCT the authority to seek “primacy” from the EPA for the enforcement of the Underground Injection Control Program requirements related to the injection and storage of ACD and requires that rules adopted by the RCT be consistent with any federal rules or requirements.
- Directs the TCEQ and the RCT to amend the MOU or enter into a new MOU that outlines duties of both agencies under the UIC program.
- Requires a permittee to demonstrate evidence of financial responsibility annually. In determining whether a permittee has sufficiently demonstrated evidence of financial responsibility, the RCT shall rely on a corporations 10k filing with the Securities and Exchange Commission, or an audited financial statement

Section 3 – Conditions for Issuing a permit

- Establishes the conditions under which the RCT may issue a permit under this Act, including: a finding of non-endangerment of oil, gas or other mineral formations; protection of USDWs; protection of human health and safety; a finding that the reservoir is suitable to prevent escape or migration and meeting the requirements of this Act.

Section 4 & 5 – Conforming Amendments

- Under Chapter 27, Water Code, recognizes ACD injection wells and geologic storage facilities under general powers that authorize among other things the power to enter property, examine records and require financial security from applicants.
- Authorizes the RCT to receive funds as the beneficiary of any financial security required for the management of an ACD injection well or GSF.

Section 6 – Rules for Multipurpose Wells and Conversion of Wells

- Adds Section 91.801, Natural Resources Code to require the RCT to develop rules to allow persons 1) utilizing existing wells to convert those wells from their authorized purpose to a new or additional purpose including use as an ACD injection well, or 2) to authorize a well initially for multiple purposes.
- Adds Section 91.802, Natural Resources Code which specifies 1) that a well converted to a ACD injection well for geologic storage is subject to Subchapter C-1, Chapter 27, Water Code, and 2) a conversion from using an ACD injection well for enhanced recovery operations to use for geologic storage is not a change in purpose and does not require a new permit.

Section 7 – Ownership and Stewardship of Anthropogenic Carbon Dioxide

- Amends the Natural Resources Code adding a new Chapter 120.
- Specifies that by default the stored ACD is owned by the storage operator or operator's heirs, successors or assigns unless willfully abandoned, administratively transferred or transferred or conveyed by operation of some other law or legal document. Gives the owner authority to recover the stored ACD at some point in the future. Specifies that ACD used for enhanced recovery operations is exempt from this section.
- Establishes the Anthropogenic Carbon Dioxide Storage Trust Fund funded by money collected for permitting, monitoring and inspecting CO₂ injection wells and GSFs, and enforcement. Money in the fund can be used for training, technology transfer, inspection, investigation, remediation and enforcement.
- Directs the RCT to develop rules to govern the extraction of stored ACD and gives the RCT jurisdiction over the extraction of ACD.

Section 8. Repeals Section 27.038, Water Code which gave the RCT jurisdiction over the injection of carbon dioxide produced by a clean coal project. The repealer is necessary to avoid confusion with the passage of SB 1387.

Section 9 – Study of Geologic Storage Capacity on State Owned Lands.

- Requires the Commissioner of the Texas General Land Office to prepare a report on a framework for managing geologic carbon storage activities on state-owned land, including state-owned submerged land.
- The report must identify geologic storage capacity on state owned lands; propose a regulatory framework for using state-owned lands for geologic storage of carbon dioxide; recommendations for additional legislation required to promote and manage geologic

storage on state-owned lands; and identification of legal and regulatory issues that occur when the state has title to the mineral estate but not the surface estate.

- Directs the GLO to consult with the following agencies:
 - The Bureau of Economic Geology
 - The RCT
 - The TCEQ
 - And other appropriate agencies.

Section 10- Study of Geologic Storage in Saline Formations

- Requires TCEQ and the railroad commission, in consultation with the Bureau of Economic Geology, not later than December 1, 2010, to issue a joint report to the legislature that; analyzes the requirements for the injection and geologic storage of anthropogenic carbon dioxide into saline formations that are not productive of oil, gas, or geothermal resources; recommends a permitting process for such anthropogenic wells and geologic storage facilities; recommends the agency or agencies that should have jurisdiction over such permitting or any other permitting of geologic storage facilities not subject to Subchapter C-1, Chapter 27, Water code as added by this act; and assesses the status of compliance with any federal rules regulating the geologic storage and associated injection of anthropogenic carbon dioxide.
- Sets forth the requirements of the report including:
 - recommendations for mitigating any negative effects of federal greenhouse gas reporting requirements on owners and producers of naturally occurring CO₂;
 - a description of the status of leasehold or mineral estate liability issues related to subsurface trespass of ACD stored in private or state-owned land;
 - and analysis of and recommendations to address the attributes of subsurface area of operations for geologic storage facilities and methods of financial assurance and allocation of long-term liability.

Section 11 – Rulemaking Authority

- Requires the TCEQ to adopt rules under Section 27.046, Water Code, as soon as practicable after the effective date of this Act.
- Requires the RCT, not later than March 1, 2010, to adopt rules under Section 27.047, Water Code, as added by this Act for geologic storage and associated injection of carbon dioxide in connection with enhanced recovery operations when the injection is primarily for the purpose of geologic storage and only incidental production of hydrocarbons is occurring.
- Requires the RCT, not later than September 1, 2010, to adopt rules under Section 27.047, Water Code, as added by this Act, for the geologic storage of carbon dioxide in and the injection of carbon dioxide into a reservoir that is initially or may be productive of oil, gas or geothermal resources (i.e. concurrent or simultaneous EOR and geologic storage).

- Requires TCEQ and the RCT to adopt rules under Section 27.049, Water Code, as added by this Act, as soon as practicable after the effective date of this Act.
- Requires the RCT to adopt rules under Sections 91.801 and 120.004, Natural Resources Code, as added by this Act, as soon as practicable after the effective date of this Act.

Section 12. This is the Ogden amendment requiring a specific appropriation to implement the provisions of this act creating a new program or imposing a new duty on a governmental entity.

Section 13 – Effective Date – September 1, 2009.