

## **BILL ANALYSIS**

C.S.H.B. 2669  
By: Crownover  
Environmental Regulation  
Committee Report (Substituted)

### **BACKGROUND AND PURPOSE**

Currently, there is no regulatory framework in Texas law for the non-commercial sequestration of carbon dioxide and entities wanting to capture and sequester carbon dioxide for long-term storage are left without clear legal guidelines by which to operate. Under the new administration in Washington, D.C., the adoption of federal mandates to regulate carbon dioxide as a pollutant is more likely than ever. Texas refineries, electric utilities and operators may very well be required to capture and sequester carbon dioxide under new federal rules as early as 2011.

C.S.H.B. 2669 amends current law relating to the implementation of projects involving the capture, injection, sequestration, or geologic storage of carbon dioxide.

### **RULEMAKING AUTHORITY**

Rulemaking authority is expressly granted to the Texas Commission on Environmental Quality in SECTION 2 of this bill.

Rulemaking authority is expressly granted to the Railroad Commission of Texas in SECTION 2 SECTION 6 and SECTION 7 of this bill.

### **SECTION BY SECTION ANALYSIS**

SECTION 1. Amends Section 27.002, Water Code, by adding Subdivisions (19)-(25), to define "anthropogenic carbon dioxide," "anthropogenic carbon dioxide injection well," "enhanced recovery operation," "geologic storage," "geologic storage facility," "oil or gas," and "reservoir."

SECTION 2. Amends Chapter 27, Water Code, by adding Subchapter C-1. GEOLOGIC STORAGE AND ASSOCIATED INJECTION OF ANTHROPOGENIC CARBON DIOXIDE.

Section 27.041. JURISDICTION. (a) Provides that the railroad commission has jurisdiction over the injection and geologic storage of carbon dioxide in a reservoir that is related to the production of oil, gas, or geothermal resources or a saline formation, except as provided in Subsection (b).

(b) Provides that the jurisdiction of the railroad commission over the injection and geologic storage of carbon dioxide in a saline formation, described by Subsection (a) of Section 27.041, is subject to the review of the legislature based on the recommendations made in the preliminary report described by Section 10 of the Act enacting this section.

(c) Provides that regardless of whether a well used for the injection and geologic storage of carbon dioxide was initially completed for that purpose or was converted to that purpose the railroad commission has jurisdiction, except as provided by Subsection (b).

Section 27.042. APPLICABILITY. Provides that this subchapter does not apply to the injection of fluid for the primary purpose of enhanced recovery operations using a Class II injection well as defined by 40 C.R.F. Section 144.6(b).

Section 27.043. PERMIT FROM RAILROAD COMMISSION. Prohibits a person from beginning drilling or operating an anthropogenic carbon dioxide injection well for geologic storage or constructing or operating a geologic storage facility regulated under this subchapter without first obtaining the necessary permits from the railroad commission.

Section 27.044. INFORMATION REQUIRED OF APPLICANT. Requires an applicant to provide any information the railroad commission considers necessary to discharge its duties under this subchapter.

Section 27.045. FEES. (a) Authorizes the railroad commission to impose fees to cover the cost of permitting, monitoring and inspecting anthropogenic wells for geologic storage and geologic storage facilities; and enforcing and implementing Subchapter C-1 and rules adopted by the railroad commission under that subchapter.

(b) Requires that fees collected by the railroad commission under this section be deposited to the credit of the anthropogenic carbon dioxide storage trust fund established under Section 120.003, Natural Resources Code.

Section 27.046. LETTER FROM EXECUTIVE DIRECTOR. (a) Requires that an application to the railroad commission for a permit under rules adopted under Subchapter C-1 include a letter from the executive director of TCEQ (executive director) stating that drilling and operating the injection well for geologic storage or operating the geologic storage facility will not injure any freshwater strata in that area and that the formation or stratum to be used for the geologic storage facility is not freshwater sand.

(b) Requires the executive director, in making the determination required by Subsection (a), to review certain information.

(c) Requires TCEQ to adopt rules to implement and administer this section.

Section 27.047. RULES. Requires the railroad commission to adopt rules and procedures reasonably required for the performance of its powers, duties and functions under Subchapter C-1 including rules for the geologic storage and associated injection of anthropogenic carbon dioxide, including certain activities; the enforcement of Subchapter C-1 and rules adopted by the railroad commission under that subchapter; and the collection and administration of certain fees and penalties.

Section 27.048. CONSISTENCY WITH AND IMPLEMENTATION OF FEDERAL REQUIREMENTS. (a) Requires that rules adopted by TCEQ or the railroad commission under Subchapter C-1 be consistent with applicable rules or regulations adopted by a federal agency governing the injection and geologic storage of anthropogenic carbon dioxide including the United States Environmental Protection Agency.

(b) Provides that if rules or regulations adopted to govern the geologic storage and associated injection of anthropogenic carbon dioxide under a federal statute including the federal Safe Drinking Water Act (42 U.S.C. Section 300f et seq.) allow this state to seek primary enforcement authority under the underground injection control program: TCEQ and the railroad commission shall seek primacy to administer and enforce the program; and this state shall seek primacy to administer and enforce the program for the injection and geologic storage of carbon dioxide in a saline formation.

Section 27.049. MEMORANDUM OF UNDERSTANDING. Requires TCEQ and the railroad commission to amend the memorandum of understanding recorded in 16 T.A.C. Section 3.30 or enter into a new memorandum of understanding, as necessary to comply with this subchapter.

Section 27.050. FINANCIAL RESPONSIBILITY. (a) Requires a person to whom a permit is issued under this subchapter to annually provide to the railroad commission satisfactory evidence of financial responsibility.

(b) Requires the railroad commission to rely on certain information in determining whether the person is financially responsible.

SECTION 3. Amends Section 27.051, Water Code, by amending Subsection (b) and adding Subsection (b-1). Section 27.051 (b) Authorizes the railroad commission to grant an application for a permit under Subchapter C in whole or part and to issue the permit if it finds certain information.

Section 27.051(b-1) Authorizes the railroad commission to issue a permit under Subchapter C-1 if it finds that the injection and geologic storage of anthropogenic carbon dioxide will not endanger or injure any oil, gas, or other mineral formation; that, with proper safeguards, both ground and surface freshwater can be adequately protected from pollution; that the injection of anthropogenic carbon dioxide will not endanger human health and safety; that the reservoir into which the anthropogenic carbon dioxide is injected is suitable for or capable of being made suitable for protecting against the escape or migration of anthropogenic carbon dioxide from the reservoir; and that the applicant for the permit meets all of the statutory and regulatory requirements for the issuance of the permit.

SECTION 4. Amends Sections 27.071 and 27.072, Water Code. Amends Section 27.071 to authorize members and employees of TCEQ and the railroad commission to enter public and private property to inspect and investigate conditions relating to certain wells or geologic storage activities within their respective jurisdictions or to monitor compliance with a rule, permit, or other order of TCEQ or railroad commission.

Amends Section 27.072 to authorize members and employees of TCEQ and the railroad commission to examine and copy certain documents of a business being investigated as provided by Section 27.071 relating to the operation of certain wells or a geologic storage facility or any other records required to be maintained by law.

SECTION 5. Amends Sections 27.073, Water Code, by amending Subsection (a) and adding Subsection (b-1). Amends Section 27.073(a) to authorize TCEQ or the railroad commission require a person who has been issued an injection well permit to maintain a performance bond or other form of financial security to ensure that an abandoned injection well is properly plugged or funds are available for plugging, post-injection site care, and closure of an anthropogenic well subject to Subchapter C-1.

Adds Section 27.073(b-1) to provide that the railroad commission is authorized to receive funds as the beneficiary of a financial responsibility mechanism established under Chapter 27 for the proper management of an anthropogenic carbon dioxide injection well or geologic storage facility.

SECTION 6. Amends Chapter 91, Natural Resources Code, by adding Subchapter R, AUTHORIZATION FOR MULTIPLE OR ALTERNATIVE USES OF WELLS.

Section 91.801. RULES AUTHORIZING MULTIPLE OR ALTERNATIVE USES OF WELLS. Requires the railroad commission to adopt rules allowing a person to obtain a permit for a well that authorizes the well to be used for multiple purposes and that would allow an operator of a well authorized by a permit issued by the railroad commission to convert the well from its authorized purpose to a new or additional purpose.

Section 91.802. LAW APPLICABLE TO GEOLOGIC STORAGE FACILITIES AND ASSOCIATED INJECTION WELLS. (a) Defines "anthropogenic carbon dioxide injection well."

(b) Provides that if a well is authorized as or converted to an anthropogenic carbon dioxide injection well for geologic storage, Subchapter C-1, Chapter 27, Water Code, applies to the well.

(c) Provides that a conversion of an anthropogenic carbon dioxide injection well from use for enhanced recovery operations to use for geologic storage is not considered to be in a change in the purpose of the well.

SECTION 7. Amends Subtitle D, Title 3, Natural Resources Code, by adding Chapter 120. OWNERSHIP AND STEWARDSHIP OF ANTHROPOGENIC CARBON DIOXIDE.

Section 120.001. DEFINITIONS. Defines "anthropogenic carbon dioxide," "anthropogenic carbon dioxide injection well," "geologic storage facility," "commission," and "storage operator."

Section 120.002. OWNERSHIP OF ANTHROPOGENIC CARBON DIOXIDE. (a) Provides that Section 120.002 does not apply to anthropogenic carbon dioxide injected for the primary purpose of enhanced recovery operations.

(b) Provides that carbon dioxide stored in a geologic storage facility is considered to be the property of the storage operator or the operator's heirs, successors, or assigns unless otherwise expressly provided by a legally binding document such as a contract, bill of sale, deed, mortgage, deed of trust, or by other law.

(c) Provides that anthropogenic carbon dioxide stored in a geologic storage facility is not considered to be the property of the owner of the surface or mineral estate in the land in which the anthropogenic carbon dioxide is stored or of a person claiming under the owner of the surface or mineral estate without a final judgment of willful abandonment rendered by a court or a regulatory determination of closure or abandonment.

(d) Authorizes the owner, as designated by Subsection (b) or (c), of the anthropogenic carbon dioxide stored in a geologic storage facility, or the owner's heirs, successors, or assigns, to produce, take, extract, or otherwise possess anthropogenic carbon dioxide stored in the facility.

Section 120.003. ANTHROPOGENIC CARBON DIOXIDE STORAGE TRUST FUND. (a) Creates the anthropogenic carbon dioxide storage trust fund (fund) as a special fund in the state treasury.

(b) Provides that the fund is an interest-bearing fund and requires that interest earned on money in the fund be deposited to the credit of the fund.

(c) Requires that fees collected by the railroad commission under Subchapter C-1, Chapter 27, Water Code, and penalties imposed for violations of that subchapter or rules adopted under that subchapter be deposited to the credit of the fund.

(d) Authorizes the fund to be used by the railroad commission only for certain activities.

Section 120.004. EXTRACTION OF STORED ANTHROPOGENIC CARBON DIOXIDE. (a) Requires the railroad commission to adopt rules allowing anthropogenic carbon dioxide stored in a geologic storage facility to be extracted for a commercial or industrial use.

(b) Provides that the railroad commission has jurisdiction over the extraction of anthropogenic carbon dioxide stored in a geologic storage facility.

SECTION 8. Repealer: Section 27.038, Water Code, is repealed.

SECTION 9. (a) Defines "anthropogenic carbon dioxide," "geologic storage," "geologic storage facility," and "state-owned land."

(b) Requires the commissioner of the General Land Office, not later than December 1, 2010, to prepare and file with the legislature a preliminary report on a recommended framework for managing activities related to geologic storage on state-owned land. Sets forth the requirements of the report.

(c) Requires the commissioner of the General Land Office to coordinate with the Bureau of Economic Geology of The University of Texas at Austin, the railroad commission, TCEQ, and the heads of other appropriate agencies when preparing the preliminary report under Subsection (b).

(d) Provides that the section expires December 31, 2010.

SECTION 10. (a) Defines "anthropogenic carbon dioxide," "geologic storage," and "geologic storage facility."

(b) Requires TCEQ and the railroad commission, in consultation with the Bureau of Economic Geology of The University of Texas at Austin, to prepare and file with the legislature a joint preliminary report not later than December 1, 2010. The subsection also sets forth some requirements of what is to be contained in the report.

(c) Sets forth the requirements of the preliminary report.

(d) Provides that the section expires December 31, 2010.

SECTION 11. (a) Requires TCEQ to adopt rules under Section 27.046, Water Code, as added by this Act, as soon as practicable after the effective date of the Act.

(b) Requires the railroad commission to adopt rules under Section 27.047, Water Code, as added by this Act, for the geologic storage and associated injection of carbon dioxide in connection with enhanced recovery operations not later than March 1, 2010. This excludes enhanced recovery operations for which there is reasonable expectation of more than insignificant future production volumes or rates as a result of the injection of anthropogenic carbon dioxide, and operating pressures are not higher than reasonably necessary to produce the production volumes or rates described by this subsection.

(c) Requires the railroad commission to adopt rules under Section 27.047, Water Code, as added by this Act, for the injection and geologic storage of carbon dioxide in a reservoir related to the production of oil, gas, or geothermal resources not later than September 1, 2010.

(d) Requires TCEQ and the railroad commission 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.

(e) Requires the railroad commission 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. Effective date.

### **REPEALER**

C.S.H.B. 2669 repeals Section 27.038, Water Code.

### **EFFECTIVE DATE**

September 1, 2009.

### **COMPARISON OF ORIGINAL TO SUBSTITUTE**

The caption for C.S.H.B. 2669 reads "relating to the implementation of projects involving the capture, injection, sequestration, or geologic storage of carbon dioxide." The original caption was "relating to the injection and geologic storage of anthropogenic carbon dioxide."

SECTION 1. C.S.H.B. 2669 differs from the original in Section 27.002 by making changes to the definitions of "anthropogenic carbon dioxide," "anthropogenic carbon dioxide injection well," "enhanced recovery operation" and "geologic storage facility" and "reservoir."

SECTION 2. C.S.H.B. 2669 differs from the original by deleting Section 2 in its entirety and renumbering the remaining sections accordingly.

The substitute differs from the original in Section 27.041(a) by providing that, except as provided by Subsection (b), the railroad commission has jurisdiction over the injection and geologic storage of carbon dioxide in a reservoir that is initially or may be productive of oil, gas or geothermal resources or a saline formation directly above or below that reservoir. The original did not include the exception language, the reference to the geologic storage of carbon dioxide, or the reference to a reservoir that may currently be productive in describing the jurisdiction of the railroad commission. The substitute differs from the original by striking language relating to the continuing jurisdiction of the railroad commission over certain wells.

The substitute differs from the original by creating new Section 27.041(b) and Section 27.041(c). Section 27.041(b) provides the jurisdiction of the railroad commission over the geologic storage of carbon dioxide in, and the injection of carbon dioxide into, a saline formation described by Subsection (a) of this section is subject to the review of the legislature based on the recommendations made in the preliminary report described by Section 10 of the Act enacting this section. Section 27.041(c) provides that, except as provided by Subsection (b), the railroad commission has jurisdiction over a well used for the purpose provided by Subsection (a) regardless of whether the well was initially completed for that purpose or was initially completed for another purpose and is converted to the purpose provided by Subsection (a).

The substitute differs from the original by creating new Section 27.042 from language contained in 27.041(b) of the original and by providing the subchapter does not apply to the injection of fluid through the use of a Class II injection well as defined by 40 C.F.R., Section 144.6(b) for the primary purpose, rather than the sole purpose, of enhanced recovery operations, rather than enhanced recovery of oil and gas.

The substitute differs from the original in Section 27.043 by prohibiting a person from beginning drilling or operating an anthropogenic carbon dioxide injection well for geologic storage, rather than just an anthropogenic carbon dioxide injection well, or constructing or operating a geologic storage facility regulated under this subchapter without first obtaining the necessary permits, rather than a permit, from the railroad commission.

The substitute differs from the original in Section 27.045(a) by authorizing the railroad commission to impose fees to cover the cost of permitting, monitoring and inspecting injection wells for geologic storage and geologic storage facilities; and enforcing and implementing, rather than just enforcing, this subchapter and rules adopted by the railroad commission under this subchapter. The original does not specify that the wells are "for geologic storage."

The substitute differs from the original in Section 27.046 by requiring an application to the railroad commission for a permit under rules adopted under this subchapter, rather than a permit under this subchapter, include a letter from the executive director of TCEQ stating that drilling and operating the injection well for geologic storage, rather than just injection well, or operating the geologic storage facility will not injure, rather than endanger, any freshwater strata in that area and that the formation or stratum to be used for the geologic storage facility is not freshwater sand.

The substitute differs from the original in Section 27.047 by using the term "the geologic storage and associated injection" in place of the term "the injection and geologic storage" in this section and in remaining sections of the bill. The original specifies that the acquisition of property rights may be included in geologic site characterization.

The substitute differs from the original in Section 27.048(a) by requiring that rules adopted by TCEQ or the railroad commission, rather than just the railroad commission, under this subchapter be consistent with applicable rules or regulations, rather than consistent with and not more stringent than rules or regulations, adopted by the U.S. Environmental Protection Agency or other federal agency. The substitute differs from the original in Section 27.048(b) by adding "or another federal statute" following "the federal Safe Drinking Water Act (42 U.S.C. Section 300f et seq.)" and by creating Section 27.048 (b)(1) and Section 27.048 (b)(2). Section 27.048(b)(1) uses existing language to require, rather than allow, TCEQ and the railroad commission to seek primacy to administer and enforce the program subject to the jurisdiction granted under this subchapter, rather than the jurisdiction of each state agency under state law.

Section 27.048(b)(2) requires this state to seek primacy to administer and enforce the program for the injection and geologic storage of carbon dioxide in a saline formation.

The substitute differs from the original in Section 27.049 by changing the format of the language.

The substitute differs from the original in Section 27.050 by creating Section 27.050(a) from existing language in the original and creating 27.050(b) to require the railroad commission, in determining whether the person is financially responsible, to rely on certain information.

SECTION 3. C.S.H.B. 2669 differs from the original in Section 27.051(b-1)(2) by replacing "groundwater" with "ground" and "pollution" with "carbon dioxide migration or displaced formation fluids;" in (b-1)(3) by allowing permits if the injection will not endanger or injure, rather than just endanger, human health and safety; and by creating a new (b-1)(4) to read "that the reservoir into which the anthropogenic carbon dioxide is injected is suitable for or capable of being made suitable for protecting against the escape or migration of anthropogenic carbon dioxide from the reservoir" and renumbering the remaining subdivision accordingly.

SECTION 4. C.S.H.B. 2669 differs from the original in Section 27.071 and Section 27.072 by striking "anthropogenic carbon dioxide injection well" from both sections.

SECTION 5. C.S.H.B. 2669 differs from the original in Section 27.073(a) by authorizing a person to whom an injection well permit, rather than an injection well or anthropogenic carbon dioxide well permit, is issued to be required by TCEQ or the railroad commission to maintain a performance bond or other form of financial security to ensure that an abandoned injection well is properly plugged or funds are available for plugging, post-injection site care, and closure of an anthropogenic well subject to Subchapter C-1. The original did not include the reference to Subchapter C-1. The substitute differs from the original in 27.073(b) by deleting language from the original that amended Subsection (b) and by adding Subsection (b-1) providing the railroad commission is authorized to receive funds as the beneficiary of a financial responsibility mechanism established under this chapter for the proper management of an anthropogenic well or geologic storage facility.

SECTION 6. C.S.H.B. 2669 differs from the original by amending Chapter 91, Natural Resources Code by adding Subchapter R to read "AUTHORIZATION FOR MULTIPLE OR ALTERNATIVE USES OF WELLS" rather than "CONVERSION OF PURPOSE OF WELLS." The substitute differs from the original in Section 91.801 by changing the heading to read "RULES AUTHORIZING MULTIPLE OR ALTERNATIVE USES OF WELLS" rather than "CONVERSION OF WELL TO NEW OR ADDITIONAL PURPOSE." The substitute also differs from the original in 91.801 by requiring the railroad commission to adopt rules allowing a person to obtain a permit for a well from the commission that authorizes the well to be used, rather than an injection well permit, from the railroad commission that authorizes the well to be used for multiple purposes. The substitute differs from the original by creating new Section 91.802. LAW APPLICABLE TO GEOLOGIC STORAGE FACILITIES AND ASSOCIATED INJECTION WELLS. Section 91.802(a) Defines "anthropogenic carbon dioxide injection well." The substitute creates Section 91.802 (b) from existing language previously contained in Section 91.801 providing that if a well is authorized as or converted to an anthropogenic well for geologic storage, Subchapter C-1, Chapter 27, Water Code, applies to the well. The substitute creates Section 91.802(c) providing that a conversion of an anthropogenic well from use for enhanced recovery operations to use for geologic storage is not considered to be in a change in the purpose of the well.

SECTION 7. C.S.H.B. 2669 differs from the original in Section 120.002 by creating new Subsection (a) providing that Section 120.002 does not apply to anthropogenic carbon dioxide injected for the primary purpose of enhanced recovery operations and renumbering the remaining sections accordingly. The substitute differs from the original in Section 120.002(d) by allowing storage facility owners to "produce, take, extract, or otherwise possess anthropogenic carbon dioxide stored in the facility", rather than "produce, take, or reduce to possession anthropogenic carbon dioxide stored in a geologic storage facility." The substitute differs from the original in Section 120.003(d)(2) by deleting "including surface facilities and wells"; and Section 120.003(d)(5) by adding "used for geologic storage."

SECTION 8. The repealer was contained in SECTION 11 of the original bill but no other change was made to the contents of the repealer.

SECTION 9. C.S.H.B. 2669 differs from the original by creating (a)(1) from existing language defining "anthropogenic carbon dioxide," "geologic storage" and "geologic storage facility" and by adding (a)(2) providing that "state-owned land" includes state-owned submerged land. The substitute differs from the original in (b) by requiring the commissioner of the General Land Office, not later than December 1, 2010, to prepare and file, rather than to file, with the legislature a preliminary report, rather than a report, on a recommended framework for managing activities related to geologic storage on state-owned land. The substitute differs from the original by making changes to the requirements of the report.

SECTION 10. C.S.H.B. 2669 differs from the original by adding (a) to provide that "anthropogenic carbon dioxide," "geologic storage" and "geologic storage facility" have the meanings assigned by Section 27.002, Water Code, as amended by this Act. The substitute renames the remaining subsections accordingly. The substitute differs from the original in (b) by requiring TCEQ and the railroad commission, not later than December 1, 2010, in consultation with the Bureau of Economic Geology of The University of Texas at Austin, to prepare and file with the legislature a joint preliminary report that performs certain actions listed in (b)(1)-(b)(4) created from existing and new language. The original required TCEQ and the railroad commission, not later than January 1 of each odd-numbered year, to issue a joint report to the legislature that performed certain actions. The substitute differs from the original in (c) by adding new requirements of the preliminary report in (c)(1)-(c)(4) and renumbering the remaining subsections accordingly.

SECTION 11. C.S.H.B. 2669 differs from the original by creating new (b), (c) and (d) and renumbering the remaining subsections accordingly. The substitute differs from the original in (a) by requiring TCEQ, rather than the railroad commission, to adopt rules under Section 27.046, Water Code, as added by this Act, as soon as practicable, rather than not later than January 1, 2010. The substitute adds (b) requiring the railroad commission, not later than March 1, 2010, to adopt rules under Section 27.047, Water Code, as added by this Act, for the geologic storage and associated injection of carbon dioxide in connection with enhanced recovery operations, excluding enhanced recovery operations for which there is reasonable expectation of more than insignificant future production volumes or rates as a result of the injection of anthropogenic carbon dioxide, and operating pressures are not higher than reasonably necessary to produce the production volumes or rates described by this subsection. The substitute adds (c) requiring the railroad commission, 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. C.S.H.B. 2669 differs from the original by adding (d) requiring TCEQ and the railroad commission to adopt rules under 27.049, Water Code, as soon as practicable.

SECTION 12. No change to the original.