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**SENATE BILL NO. 247**

Offered January 13, 2010

Prefiled January 12, 2010

A *BILL to amend the Code of Virginia by adding in Title 45.1 a chapter numbered 23.1, consisting of sections numbered 45.1-380.1 through 45.1-380.10, relating to the regulation of the geologic storage of carbon dioxide; penalty.*

Patron—Watkins

Referred to Committee on Agriculture, Conservation and Natural Resources

**Be it enacted by the General Assembly of Virginia:**

**1. That the Code of Virginia is amended by adding in Title 45.1 a chapter numbered 23.1, consisting of sections numbered 45.1-380.1 through 45.1-380.10, as follows:**

**CHAPTER 23.1.****GEOLOGIC STORAGE OF CARBON DIOXIDE.****§ 45.1-380.1. Definitions.**

*As used in this chapter, unless the context clearly indicates otherwise:*

*"Carbon dioxide" means carbon dioxide produced by anthropogenic sources which is of such purity and quality that it will not compromise the safety of geologic storage and will not compromise those properties of a storage reservoir that allow the reservoir to effectively enclose and contain a stored gas.*

*"Geologic storage" means permanent or short-term underground storage of carbon dioxide in a reservoir.*

*"Oil or gas" means oil, natural gas, or gas condensate.*

*"Reservoir" means any subsurface sedimentary stratum, formation, aquifer, or cavity or void, whether natural or artificially created, including oil and gas reservoirs, saline formations and coal seams, suitable for or capable of being made suitable for the injection and storage of carbon dioxide therein.*

*"Storage facility" means the underground reservoir, underground equipment, and surface buildings and equipment utilized in the storage operation, excluding pipelines used to transport the carbon dioxide from one or more capture facilities to the storage and injection site. The underground reservoir component of the storage facility includes any necessary and reasonable areal buffer and subsurface monitoring zones designated by the Director for the purpose of ensuring the safe and efficient operation of the storage facility for the storage of carbon dioxide and shall be chosen to protect against pollution, invasion, and escape or migration of carbon dioxide.*

*"Storage operator" means any person authorized by the Director to operate a storage facility.*

**§ 45.1-380.2. Authority of Director.**

*The Director shall have the jurisdiction and authority necessary to enforce the provisions of this chapter and may:*

*1. Adopt regulations consistent with this chapter and activities related to the geologic storage of carbon dioxide, including construction, operation, and closure;*

*3. Enter, at a reasonable time and manner, a storage facility to inspect equipment and facilities; to observe, monitor, and investigate operations; and to inspect records required to be maintained at the facility;*

*4. Require that storage operators provide assurance, including bonds, that money is available to fulfill the storage operator's duties;*

*5. Exercise continuing jurisdiction over storage operators and storage facilities, including the authority, after notice and hearing, to amend provisions in a permit and to revoke a permit;*

*6. Dissolve or change the boundaries of any oil or gas field or unit that is within or near a storage reservoir's boundaries; and*

*7. Enter into cooperative agreements with other governments or government entities for the purpose of regulating carbon dioxide storage projects.*

**§ 45.1-380.3. Fee determination; application and storage.**

*The Director shall by regulation establish: (i) an application fee in an amount based upon the anticipated cost of processing the application and (ii) a fee levied on the storage operator per ton of carbon dioxide injected in the geologic storage facility and based upon the costs of the Director in the administration of this chapter during the operational phase of the storage facility; for the purpose of compliance inspections, including the expense of inspecting, testing, and monitoring the geologic storage facility; and for any mechanisms needed to ensure the public health and environment subsequent to the release of liability.*

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59 § 45.1-380.4. *Permit required; director approval; recordation or order.*

60 A. *After public notice and hearing, a person may use a reservoir as a storage facility for carbon*  
61 *dioxide pursuant to a permit issued by the Director.*

62 B. *The permit application shall establish that:*

63 1. *The storage operator has complied with all applicable laws and regulations;*

64 2. *The proposed storage will not unduly endanger human health and the environment and is in the*  
65 *public interest;*

66 3. *The storage facility is suitable and feasible for carbon dioxide injection and storage;*

67 4. *The carbon dioxide to be stored is of a quality that allows it to be safely and efficiently stored in*  
68 *the storage reservoir;*

69 5. *If the storage facility contains commercially valuable minerals, a permit may be issued only if the*  
70 *Director is satisfied that the interests of the mineral owners or mineral lessees will not be adversely*  
71 *affected or have been addressed in an arrangement entered into by the mineral owners or mineral*  
72 *lessees and the storage operator;*

73 6. *The proposed storage facility will not adversely affect surface waters or formations containing*  
74 *fresh water;*

75 7. *No more than a de minimis volume of carbon dioxide will escape from the storage reservoir;*

76 8. *The storage facility will not endanger human health nor unduly endanger the environment;*

77 9. *The horizontal and vertical boundaries of the storage reservoir are defined. These boundaries*  
78 *must include buffer areas to ensure that the storage facility is operated safely and as contemplated; and*

79 10. *The storage operator will establish monitoring facilities and protocols to assess the location and*  
80 *migration of carbon dioxide injected for storage and to ensure compliance with all permit, statutory,*  
81 *and administrative requirements.*

82 C. *When the Director issues a permit, he shall also issue a certificate stating that the permit has*  
83 *been issued, describing the area covered, and containing other information the Director deems*  
84 *appropriate. The storage operator shall file a copy of the certificate with the clerk of the circuit court in*  
85 *the jurisdiction where the storage facility is located.*

86 § 45.1-380.5. *Protection against pollution and escape of carbon dioxide.*

87 *The Director shall issue such orders, permits, certificates, rules and regulations, including*  
88 *establishment of appropriate and sufficient financial sureties as may be necessary, for the purpose of*  
89 *regulating the drilling, operation, and well plugging and abandonment and removal of surface buildings*  
90 *and equipment of the storage facility to protect the storage facility against pollution, invasion, and the*  
91 *escape or migration of carbon dioxide.*

92 § 45.1-380.6. *Title to carbon dioxide; liability.*

93 A. *The storage operator retains title to the carbon dioxide injected into and stored in a storage*  
94 *reservoir until the Director issues a certificate of project completion pursuant to § 45.1-380.7. The*  
95 *storage operator remains liable for any damage the carbon dioxide may cause, including damage*  
96 *caused by carbon dioxide that escapes from the storage facility, during the time in which he holds title*  
97 *to the carbon dioxide.*

98 B. *Once a certificate of project completion is issued, title to the storage facility and to the stored*  
99 *carbon dioxide transfers, without payment of any compensation, to the Commonwealth. Title acquired by*  
100 *the Commonwealth includes all rights and interests in, and all responsibilities and liabilities associated*  
101 *with, the stored carbon dioxide. The storage operator and all persons who generated any injected*  
102 *carbon dioxide are released from all regulatory requirements associated with the storage facility. Any*  
103 *bonds posted by the storage operator must be released at such time.*

104 § 45.1-380.7. *Certificate of project completion; liability release.*

105 *Ten years after the cessation of storage operations, the permittee may apply for a certificate of*  
106 *project completion. After public notice and hearing, the Director may issue the certificate of project*  
107 *completion upon a showing that the storage operator:*

108 1. *Is in full compliance with all laws governing the storage facility;*

109 2. *Demonstrates he has addressed all pending claims regarding the storage facility's operation;*

110 3. *Demonstrates that the storage reservoir is reasonably expected to retain the stored carbon dioxide*  
111 *stored;*

112 4. *Shows that all wells, equipment, and facilities to be used in the post-closure period are in good*  
113 *condition and retain mechanical integrity; and*

114 5. *Shows that it has plugged wells, removed equipment and facilities, and completed reclamation*  
115 *work as required by the Director.*

116 § 45.1-380.8. *Enhanced hydrocarbon recovery operations.*

117 *The Director may adopt regulations to allow conversion of an existing enhanced hydrocarbon*  
118 *recovery operation into a storage facility. Upon approval of the conversion of such a project, the*  
119 *provisions of this chapter shall apply. Nothing in this chapter shall apply to the use of carbon dioxide*  
120 *as a part of or in conjunction with any enhanced recovery methods where the sole purpose of the*

121 project is enhanced oil or gas recovery.

122 § 45.1-380.9. Carbon Dioxide Storage Facility Trust Fund established.

123 There is hereby created in the state treasury a special nonreverting fund to be known as the Carbon  
124 Dioxide Storage Facility Trust Fund, hereafter referred to as "the Fund." The Fund shall be established  
125 on the books of the Comptroller. All moneys collected under this chapter shall be paid into the state  
126 treasury and credited to the Fund. Interest earned on moneys in the Fund shall remain in the Fund and  
127 be credited to it. Any moneys remaining in the Fund, including interest thereon, at the end of each  
128 fiscal year shall not revert to the general fund but shall remain in the Fund. Moneys in the Fund shall  
129 be used solely for long-term monitoring of the storage facility, including remaining surface facilities and  
130 wells, remediation of mechanical problems associated with remaining wells and surface infrastructure,  
131 repairing mechanical leaks at the site, and plugging and abandoning remaining wells under the  
132 jurisdiction of the Director for use as observation wells. Expenditures and disbursements from the Fund  
133 shall be made by the State Treasurer on warrants issued by the Comptroller upon written request signed  
134 by the Director.

135 § 45.1-380.10. Penalties.

136 Any person who violates a provision of this chapter or a regulation adopted hereunder shall be  
137 subject to a civil penalty imposed by the Director not to exceed \$12,500. Each day during which the  
138 violation is found to have existed shall constitute a separate offense. In determining the amount of the  
139 penalty, the Director shall consider: (i) the nature of the violation, including its circumstances and  
140 gravity, and the hazard or potential hazard to the public's or a private person's health, safety, and  
141 economic welfare; (ii) the economic or environmental harm caused by the violation; (iii) the economic  
142 value or other advantage gained by the person committing the violation; (iv) the history of previous  
143 violations; (v) the amount necessary to deter future violations; and (vi) efforts to correct the violation.