

CARBON CAPTURE AND SEQUESTRATION LEGISLATION IN THE UNITED STATES OF AMERICA



Expanded Version

September 2010

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SOUTHERN STATES ENERGY BOARD

Carbon Capture and Sequestration Legislation In the United States of America

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Our Mission

Through innovations in energy and environmental policies, programs, and technologies, the Southern States Energy Board enhances economic development and the quality of life in the South.

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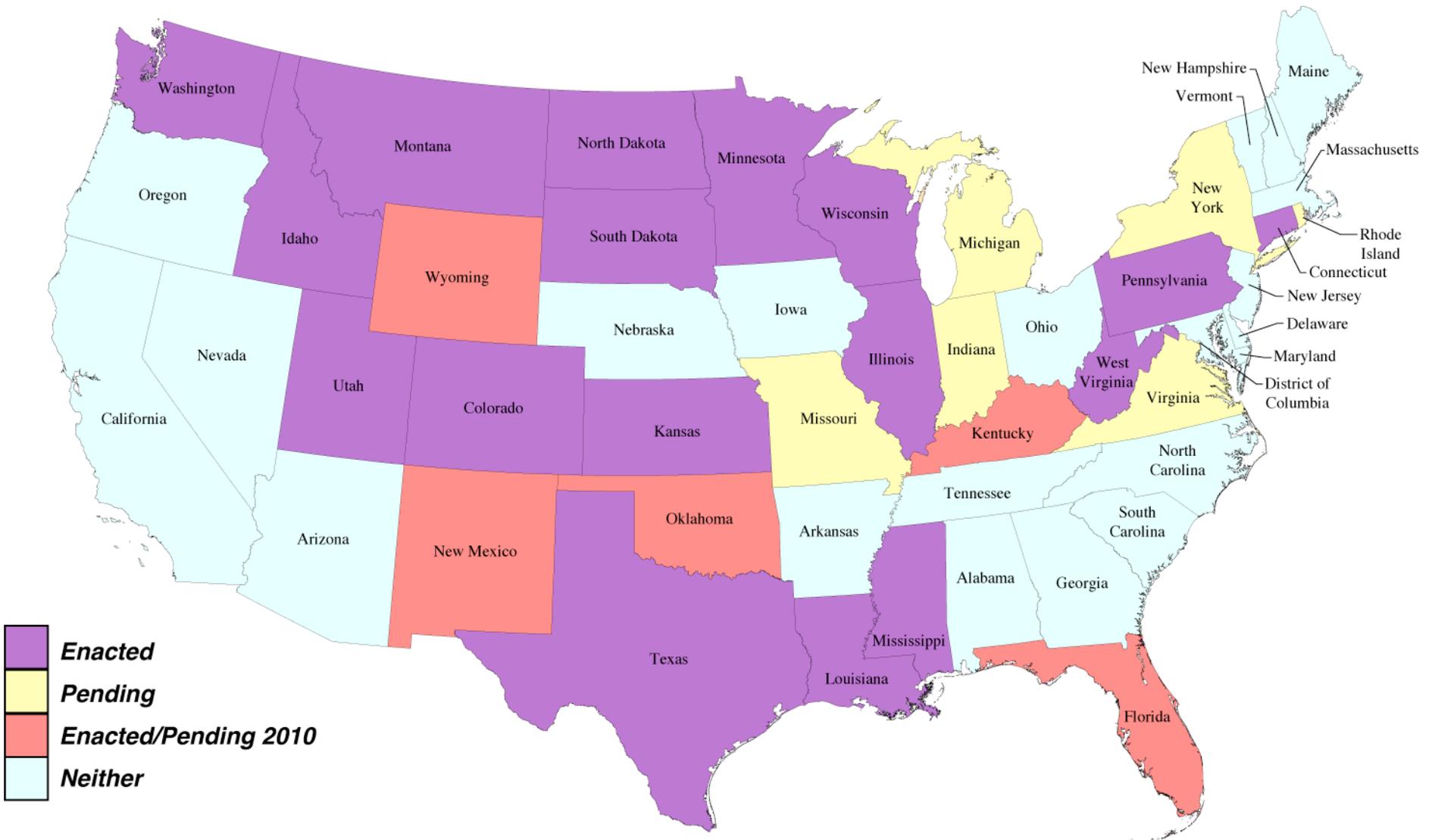
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Introduction

At the time of publication, there were 22 states with CCS related Legislation (CO, CT, FL, ID, IL, KS, KY, LA, MN, MS, MT, ND, NM, OK, PA, SD, TX, UT, WA, WI, WV, WY) and 12 states had CCS Bills Pending in 2010 (FL, IN, KY, KS, MI, MO, NM, NY, OK, RI, VA, WY). Kansas and Wyoming were the only state to pass CCS legislation within the scope of this study during the 2010 legislative sessions. While coal power is associated mainly with the Midwest and Appalachian regions, the states with CCS legislation represent a comprehensive cross section of the country.

States differ on their approach to enforcing their CCS bills. Some states are pushing full steam ahead (Texas), others are awaiting an EPA final rule (Montana). Some states tackle the statute first and regulations second (Wyoming, North Dakota) while others are working to create legislative recommendations (Utah, Illinois, West Virginia). Some states have concluded that existing legislative authority is sufficient and are able to move directly to promulgation of final regulations (Kansas).

This study on state Carbon Capture and Sequestration (CCS) Legislation does not include every element addressed by these bills. Instead, it is intended to give an overview of four key areas identified as being necessary elements of a broader comprehensive regulatory framework governing CCS activities. The key areas are Project Authority, Pore space and CO₂ ownership, Liability and Financing Sources.

Project Authority

This area addresses what state regulatory agency (SRA) will be charged with developing and administering rules and regulations governing CCS projects. The agency must have the authority to require compulsory joining of all participating interests in the underground storage reservoir and have appropriate permitting authority to require and operator to submit any data necessary to evaluate a proposed CO₂ storage project. Examples of such SRAs are State Oil and Gas Regulatory Agency, the State Environmental Agency or the State Public Utility Commission.

Pore space and CO₂ Ownership

This area addresses who has the property rights to inject CO₂ into injection wells and who owns the CO₂ in case of unintended trespass. The right to use reservoirs and associated pore space is considered a private property right in the United States and must be acquired from the owner of those rights. States are most likely to follow their traditional common law approach in determining these rights and in most cases pore space is deemed to be owned by the surface estate. CO₂, on the other hand, is treated like any other commodity and, in general, is owned by the injector.

Liability

This area addresses what party is liable for the injected CO₂ both during the injection, closure and for the long-term post closure phase. What party is liable depends, therefore, on the phase of the project. The injection phase is the period of time during active injection. The closure period is the time when the plugging of the well is completed and continues until a future date is reached, usually 10 years after injection activities and the wells are plugged. During these phases, the operator is the liable party. The post closure phase is the period of time beginning when the project is deemed complete, usually marked by the issuance of a Certificate of Completion, and extends for the life of the well. During this phase, liability transfer to the state for monitoring, verification and remediation activities. The injector is then usually released from all liability.

Financing Sources

This area addresses both the costs of the CO₂ injection projects themselves and the long-term costs. For the costs associated with the injection project, many states will give tax incentives in the form of sales tax, income tax or property tax exemptions for qualifying projects. Many states have established some type of Carbon Capture and Sequestration Trust Fund to pay for the expense of long-term monitoring, verification and



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remediation. These trusts would be industry funded on a cost per ton basis and state administered.

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CO	HB 06-1281 (2006)				Allows public utilities to recover costs incurred in connection with IGCC projects, including costs of study and engineering, through an adjustment clause. Requires that each such plant: use Colorado coal or other western coal, demonstrate the capture and sequestration of a portion of its carbon dioxide emissions, be of relatively small size (350 MW) unless a larger facility is necessary to qualify for federal funding or other financial support, and be located in Colorado.
FL	HB 549 (2007)				Alternative cost recovery mechanisms for the recovery of costs incurred in the siting, design, licensing, and construction of IGCC. Such mechanisms shall be designed to promote utility investment in IGCC power plants and allow for the recovery in rates of all prudently incurred costs, and shall include, but are not limited to: recovery through the capacity cost recovery clause of any preconstruction costs, recovery through an incremental increase in the utility's capacity cost recovery clause rates of the carrying costs on the utility's projected construction cost balance associated with the IGCC power plant.



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IL	P.A. 92-0012 (2002) P.A. 93-0167 (2004) P.A. 94-65 (2005) P.A. 94-1030 (2006) P.A. 95-18 (2007)				Incentives for IGCC plants.
IL	SB 1987 (2009)				Illinois power agency may fund or operate sequestration facility.
IL	SB 1592 (2007)				Incentives for advanced coal plants in locations where geology is suitable for sequestration.
IL	SB 1704 (2007)		Illinois to take title to injected carbon dioxide from the FutureGen project.	State assumes any liabilities associated with the sequestered gas both during operation and for long-term liability, as well as any current or future environmental benefits, marketing claims, tradable credits, emissions allocations or offsets.	Exempts the FutureGen project from Illinois tax on electrical generating units.



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IN	SB 21 (introduced 2010)	Department of Natural Resources			
IN	P.L. 105-1989 (1989) P.L. 159-2002 (2002) P.L. 174-2005 (2005) P.L. 191-2005 (2005) P.L. 175-2007 (2007)				Incentives for clean coal technology.
KS	HB 2419 (2007)	State Corporation Commission			Any carbon dioxide capture, sequestration or utilization property; and any electric generation unit which captures and sequesters all carbon dioxide and other emissions are exempt from all Kansas state property taxes. A taxpayer shall be entitled to a deduction from Kansas adjusted gross income with respect to the amortization of the amortizable costs of carbon dioxide capture, sequestration or utilization machinery and equipment based upon a period of 10 years.



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KS	SB 303 (2006)				The amount of the credit to which a taxpayer is entitled shall be equal to the sum of: (1) an amount equal to 10% of the taxpayer's qualified investment for the first \$250 million invested and (2) an amount equal to 5% of the amount of the taxpayer's qualified investment that exceeds \$250 million. Such credit shall be taken in 10 equal, annual installments, beginning with the year in which the taxpayer places into service the new integrated coal gasification power plant or the expansion of an existing integrated coal gasification power plant.
KS	HB 2418 (2010)	State Corporation Commission		Exempts the Commission and the state from assuming liability for the underground storage of carbon dioxide or the maintenance of any carbon dioxide injection well or underground storage of carbon dioxide except as permitted by the Kansas tort claims act	



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KY	HB 1 (2007)				To qualify for the incentives under the Incentives for Energy Independence Act, an alternative fuel or gasification facility that uses coal as the primary feedstock must have a capital investment of at least \$100 million. The incentives include sales and use tax incentives of up to 100% of the taxes paid on purchases of tangible personal property made to construct, retrofit, or upgrade an eligible project and up to 80% of the severance taxes paid on the purchase or severance of coal that is specifically used by an alternative fuel facility or a gasification facility as feedstock for an eligible project.
LA	HB 661 (2009)	Office of Conservation	CO2 ownership matter of private contract.	Operator is liable during operation; state assumes ownership 10 years after injection is complete; operators and others with interest are released from future liability.	Creates the Carbon Dioxide Storage Trust Fund, and requires operators to pay a set fee per ton of CO2 injected into this fund. The fee for each storage operator is capped at 5 million dollars. Fund can be used for administrative expenses of regulating geologic storage, as well as monitoring and remediation of closed sites.
LA	HB 1117 (2008)	State Mineral Board	CO2 owned by operator.		



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LA	HB 1220 (2008)			Upon a two-thirds vote by the State Mineral Board, and after a public hearing, the Board may enter into operating agreements whereby the state receives a share of revenues from the storage of oil, natural gas, liquid or liquefied hydrocarbons, or carbon dioxide, in whole or in part, as may be agreed upon by the parties, and assumes all or a portion of the risk of the cost of the activity in those situations where the board determines it is in the best interest of the state either in equity or in the promotion of conservation to do so.	



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MI	Draft Bill	Department of Environmental Quality	Pore space owned by surface owner.	Operator is liable during operation; state assumes liability upon issuance of Certificate of Completion.	For the purpose of funding the Sequestration Trust Fund, a sequestration project owner shall pay a tax or fee for the injection of each ton of a substance injected after a sequestration order comes effective. The Department of Environmental Quality shall expend money from the Sequestration Trust Fund, upon appropriation, only for correction or remediation of physical conditions caused by operation of a sequestration project that occurs after issuance of the certificate of completion of sequestration operations.
MI	SB 775 (introduced 2010)	Department of Environmental Quality	CO2 ownership begins with operator and transfers to state 10 years after Notice of Completion.	Operator is liable during operation; state assumes liability 10 years after Notice of Completion.	The State Treasurer may receive money or other assets from any source for deposit into the Carbon Dioxide Storage Facility Trust Fund. Money in the Trust Fund shall be used by the Department of Environmental Quality for one or more of the following: long –term monitoring of storage facilities, including surface facilities, equipment and wells; remediation of mechanical problems associated with wells and surface infrastructure at storage facilities; plugging and abandoning wells for use as observation wells; paying claims associated with storage facilities.



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MN	SF 145 (2007)				The Public Utilities Commission shall allow a utility to recover expenses resulting from a conservation improvement program required by the department and contributions and assessments to the energy and conservation account, unless the recovery would be inconsistent with a financial incentive proposal approved by the commission.
MS	HB 1459 (2009)				Income tax of 1.5% on businesses that sell CO2 for EOR or sequestration
MT	SB 498 (2009)	Board of Oil and Gas Conservatory with comments from Department of Environmental Quality	Pore space owned by surface owner. CO2 owned by operator.	Prior to project completion and transfer of title, the storage operator is liable for the operation and management of the CO2 injection well, the storage reservoir and the injected or stored CO2. The completion and transfer of ownership and liability from the operator to the state is a process that takes 30 years.	Establishes a geologic storage reservoir program account in the special revenue fund.



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MT	HB 3 (2007)				All equipment used for the capture, transportation and geologic sequestration of carbon dioxide, placed into service after June 2007, will be taxed at 3% of its market value.
ND	SB 2034 (2009)				Incremental production from a tertiary recovery project that uses carbon dioxide and which has been certified as a qualified project by the industrial commission is exempt from any oil extraction taxes from the date the incremental production begins.
ND	SB 2095 (2009)	Industrial Commission	CO2 owned by operator.	Operator is liable during operation; state assumes long term liability after issuance of Certificate of Project Completion.	
ND	SB 2139 (2009)		Pore space owned by surface owner; severance prohibited.		



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ND	SB 2221 (2009)				A coal conversion facility that achieves a 20% capture of carbon dioxide emissions during a taxable period after December 31, 2009, is entitled to a 20% reduction in the state general fund share of the tax imposed under section 57-60-02 during that taxable period. The facility is entitled to an additional reduction of 1% of the state general fund share of the tax imposed under section 57-60-02 for every additional 2% points of its capture of carbon dioxide emissions. A maximum 50% reduction of the state general fund share of the tax imposed under section 57-60-02 is allowed for 80% or more capture of carbon dioxide emissions.
NM	SB 994 (2007)				Establishes an advanced energy tax credit for qualified generating facility, which is a new or re-powered coal-based electric generating unit and an associated coal gasification facility that captures and sequesters or controls carbon dioxide emissions so that by the later of January 1, 2017 or eighteen months after the commercial operation date of the qualified generating facility, no more than one thousand one hundred pounds per megawatt-hour of carbon dioxide is emitted into the atmosphere.



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NM	SB 145 (introduced 2010)		Pore space owned by surface estate owner; severance allowed		
NY	A05836 (pending)	NY Department of Environmental Conservation	Pore space owned by surface estate owner.	Operator is liable during operation; state assumes long term liability after 10 years.	
NY	A08802 (pending)	NY Department of Environmental Conservation	Pore space owned by surface owner. CO2 owned by operator.		
NY	Advanced Clean Coal Power Plant Initiative (2006)				Governor's Office on Regulatory Reform incentive program for advanced coal plants with sequestration.
OK	SB 2024 (pending)	Corporation Commission			



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OK	SB 610 (2009)	Corporation Commission for fossil fuel bearing formations; Department of Environmental Quality for all others	CO2 owned by operator.		
TX	HB 1796 (2009)	General Land Office and the Bureau of Economic Geology to build and operate a carbon dioxide repository on state-owned, offshore, submerged land.	CO2 owned by state for offshore sequestration.	School Land Board is liable during operation for offshore sequestration. After closure of an offshore geologic sequestration site, the CO2 producer is relieved of all liability.	



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TX	HB 1387 (2009)	Railroad Commission has jurisdiction over the injection of CO2 into wells for production of oil or gas.	CO2 owned by operator, unless otherwise agreed.		The anthropogenic carbon dioxide storage trust fund may be used by the Railroad Commission for activities such as: inspecting, monitoring, investigating, recording and reporting on geologic storage facilities and injection wells; long-term monitoring of such facilities and wells; remediation of mechanical problems associated with them; repairing mechanical leaks at geologic storage facilities; plugging abandoned anthropogenic carbon dioxide injection wells used for geologic storage; and compliance and enforcement activities related to geologic storage and injection wells.
TX	HB 469 (2009)				Creates a franchise tax credit of 10% of capital costs of project up to \$100 million for projects that have a capacity of at least 200MW, use IGCC or pre-combustion technology, capture and sequester at least 70% of CO2 generated and supply CO2 for EOR projects.



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TX	HB 3732 (2007)				Establishes the advanced clean energy project grant and loan program under which the producer of oil recovered through a qualified enhanced oil recovery project is entitled to an additional 50% percent reduction in that tax rate if in the recovery of the project uses carbon dioxide that is captured from an anthropogenic source in the state, which would otherwise be released into the atmosphere as industrial emissions, is measurable at the source of capture and is sequestered in one or more geological formations in this state following the enhanced oil recovery process.
VA	SB 247 (introduced 2010)	Department of Mines, Minerals and Energy	CO2 owned by operator, transfer to Commonwealth upon issuance of Certificate of Project Completeness.	Operator liable during operation, transfer to Commonwealth upon issuance of Certificate of Project Completeness.	Creates the Carbon Dioxide Storage Facility Trust Fund to be used solely for long-term monitoring of the storage facility, including remaining surface facilities and wells, remediation of mechanical problems associated with remaining wells and surface infrastructure, repairing mechanical leaks at the site and plugging and abandoning remaining wells under the jurisdiction of the Director for use as observation wells.



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VA	SB 1416/HB 3068 (2007)				A utility may apply a rate adjustment clause for recovery from customers of the costs of a coal-fired generation facility that uses Virginia coal and is located in the coalfield region of the Commonwealth or one or more major unit modifications of generation facilities, to meet the utility's projected native load obligations. The utility may recover an enhanced rate of return on common equity associated with the type of project, which may include projects using carbon capture facilities and combined cycle combustion turbines.
WA	ESSB 6001 (2007)	Department of Ecology			
WV	HB 2860 (2009)	Department of Environmental Protection			
WY	HB 17 (2010)	Water Quality Division of the Department of Environmental Quality			Establishes the geologic sequestration special revenue account to be used to measure, monitor and verify geologic sequestration sites following site closure.



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WY	HB 58 (2009)		CO2 owned by operator.	Operator liable during operation, but the owner of pore space is not liable for any effects of geologic sequestration.	
WY	SB 1 (2008)				Authorizes the Department of Environmental Quality to submit grant applications to the federal office of surface mining for distribution of \$29,910,131 for abandoned coal mine reclamation, \$89,869 for the operation of the subsidence insurance program and \$1,223,866 for evaluation of potential carbon dioxide sequestration sites and activities related to the advancement of clean coal and carbon management activities.
WY	HB 90 (2008)	Department of Environmental Quality			
WY	HB 89 (2008)		Pore space owned by surface owner, may be severed		



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IOGCC	Model Legislation (2007)	State Regulatory Agency with full authority to enter and inspect a CO2 project facility for compliance with the state rules and regulations	Pore space ownership determined by state real property laws analagous to state natural gas storage laws. CO2 owned by operator during injection.	Operator liable during operation; long term liability transfer to the state 10 years after Closure Period and operator is released from all liability.	Industry-funded and state-administered Carbon Dioxide Storage Facility Trust Fund for long-term monitoring, verification and remediation activities.



Alabama

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Arkansas

Oklahoma

Florida

Puerto Rico

Georgia

South Carolina

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Tennessee

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Maryland

U.S. Virgin Islands

Mississippi

Virginia

Missouri

West Virginia



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