

## **Appendix B**

# **Carbon Sequestration in State Statutes and Regulations**

Comments of the Attorneys General of California, Connecticut, Delaware, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota (by and through its Minnesota Pollution Control Agency), New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, and Washington, and the District of Columbia, the Maryland Department of the Environment, and the cities of Boulder (CO), Chicago, Los Angeles, New York, Philadelphia, and South Miami (FL), and Broward County (FL)

on

the Environmental Protection Agency's Proposed Review of Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 83 Fed. Reg. 65,424 (Dec. 20, 2018)

Docket ID No. EPA-HQ-OAR-2013-0495

March 18, 2019

## **Carbon Sequestration in State Statutes and Regulations**

### **STATUTES & REGULATIONS BY STATE**

#### **1. Alabama**

- a. Ala. Admin Code r. 335-6-8-.01 et seq. (2011) (amended 2015): Regulations for permitting, operating, and monitoring underground injection wells, including wells for permanent storage of carbon dioxide.

#### **2. California**

- b. Cal. Code Regs. tit. 17, § 95486 (2010) (amended 2019): California's Low Carbon Fuel Standard incorporates credits for carbon capture and storage implemented in the fuel refinement process in determining a fuel's carbon intensity.
- c. Cal. Code Regs. tit. 17, § 95852(g) (2012) (amended 2015): Carbon dioxide suppliers are regulated under California's cap-and-trade program, but any carbon dioxide supplied that is ultimately geologically sequestered is not included in their compliance obligation (e.g., carbon dioxide supplied for enhanced oil recovery).
- d. Cal. Code Regs. tit. 20, § 2904 (2007): Carbon dioxide that is sequestered is not included in the CO<sub>2</sub> emissions compliance obligation for power plants.

#### **3. Colorado**

- a. Colo. Rev. Stat. § 40-2-123 (West 2006) (amended 2017): Provides framework for utility applications to build integrated gasification combined cycle plants with carbon capture capabilities and allows waiver of utility commission's "rules requiring competitive resource acquisition" upon proper demonstration by utility. § 40-2-123(2)(f) allows full cost recovery from ratepayers for IGCC plants with carbon capture.
- b. Colo. Rev. Stat. § 25-1-1303 (West 2006): In 2006, provided \$50,000 grant to the Colorado School of Mines to research "geologic carbon sequestration as technique for mitigating the emissions of greenhouse gases in the state."

#### **4. Florida**

- a. Fla. Stat. § 366.8255 (West 2008) (amended 2012): Allows inclusion of "[c]osts or expenses prudently incurred for scientific research and geological assessments of carbon capture and storage" in utilities' environmental compliance costs which may be recovered from ratepayers.

- b. Fla. Stat. § 366.91 (West 2008) (amended 2010): Includes “electrical energy produced using pipeline-quality synthetic gas produced from waste petroleum coke with carbon capture and sequestration” in definition of “renewable energy” and requires utilities to offer to purchase renewable energy.

## 5. Illinois

- a. 20 Ill. Comp. Stat. Ann. 3855/1-75 (West 2009) (amended 2018): Requires a 5% clean coal portfolio standard for utilities and sets parameters for “initial clean coal plants” that include at least 50% carbon capture and sequestration.
- b. 415 Ill. Comp. Stat. Ann. 5/13.7 (West 2011): Allows for inspection of carbon sequestration sites by IL EPA for water quality control purposes.
- c. 20 Ill. Comp. Stat. Ann. 3855/1-80 (West 2007) (amended 2016): Authorizes Illinois Power Agency to “develop, finance, construct, or operate” clean coal power plants and carbon sequestration facilities using Agency bonds.
- d. 415 Ill. Comp. Stat. Ann. 5/9.10 (West 2001): Includes carbon sequestration as potential method for generation of voluntary emissions reduction credits.
- e. 220 Ill. Comp. Stat. Ann. 5/16-115 (West 2009) (amended 2015): In order to supply electricity to alternative retail electric suppliers as part of their renewable energy portfolios, clean coal facilities must either sequester 50% of CO<sub>2</sub> emissions or purchase offsets to cover any drop of the total emissions sequestered below 50%.
- f. 220 Ill. Comp. Stat. Ann. § 75/1 et seq. (West 2011): “Carbon Dioxide Transportation and Sequestration Act.” Regulates the construction of pipelines to transport carbon dioxide to sequestration and enhanced oil recovery, as “critical to the promotion and use of Illinois coal.”
- g. 20 Ill. Comp. Stat. Ann. § 687/6-5 (West 2007) (amended 2019): Provides funds from a ratepayer “Renewable Energy Resources and Coal Technology Development Assistance Charge” for capturing and sequestering CO<sub>2</sub> from coal combustion, and supporting research on CCS technology.
- h. 20 Ill. Comp. Stat. Ann. § 3501/825-65 (West 2010) (amended 2018): Authorizes state bonds to fund construction of clean coal plants using CCS.
- i. Ill. Admin Code tit. 35, § 730, subpart H (2012) (amended 2018): Establishes criteria and standards for Class VI CO<sub>2</sub> geologic sequestration injection wells.
- j. Ill. Admin. Code tit. 83, Part 455 (2017): Prescribes standards for complying with renewable energy portfolio standard, including clean coal standard of 50% sequestration.

- k. Ill. Admin. Code tit. 83, 302.40 (2013) (amended 2014): Regulates the negotiation of easements by pipeline companies for development of a CO<sub>2</sub> pipeline from clean coal facilities to sequestration.

## 6. Indiana

- a. Ind. Code § 8-1-8.8-12 (West 2011): “Utility Generation and Clean Coal Technology” subsection of Utilities and Transportation Code. The subsection provides financial incentives for utilities building ‘new energy’ generators, including CCS coal plants.
- b. Ind. Code § 14-39-1-1 et seq. (West 2011): “Eminent Domain for Transportation of Carbon Dioxide by Pipeline” grants certified CO<sub>2</sub> pipeline company authority to condemn a right-of-way for construction of pipelines to transport CO<sub>2</sub> to EOR, deep saline injection, or sequestration, inside or outside Indiana.

## 7. Iowa

- a. Iowa Code Ann. § 476.53 (West 2010) (amended 2018): Includes addition of carbon capture facility as significant alteration whose costs can be recovered from ratepayers.
- b. Iowa Admin. Code r. 261-401.6 (2011): Makes energy projects implementing carbon capture and storage eligible for financial assistance.

## 8. Kansas

- a. Kan. Stat. Ann. § 55-1637 (West 2007) (amended 2010): “Carbon Dioxide Reduction Act.” Authorizes regulations prescribing criteria and standards for carbon dioxide injection wells.
- b. Kan. Stat. Ann. § 79-233 (West 2007): Exempts “any carbon dioxide capture, sequestration or utilization property,” including equipment, injection wells, and electric generation units with 100% carbon capture, from property taxes.
- c. Kan. Stat. Ann. § 79-32,256 (West 2007): Provides tax deduction for CCS equipment.

## 9. Kentucky

- a. Ky. Rev. Stat. Ann. § 353.800 et seq. (West 2011): The “Geologic Storage of Carbon Dioxide” subsection of the Mines and Minerals Code states an explicit “economic priority” to attract CCS projects “that will create jobs ... and favorably position the Commonwealth for future leadership and growth in the field.” Other provisions relate to rights to ownership of pore space where carbon dioxide could be stored in geologic formations and monitoring requirements for sites where carbon dioxide has been stored.

- b. Ky. Rev. Stat. Ann. § 154.27-010 et seq. (West 2007) (amended 2011): “Incentives for Energy Independence Act.” Provides incentives, including income and sales tax credits up to 100%, for carbon capture-ready projects, defined as those built with “planning for or anticipating capture of carbon dioxide in a manner to facilitate continued operation of the facility in compliance with applicable federal requirements”; *see also* Ky. Rev. Stat. Ann. § 143.31-010 et seq. (2018) (providing tax incentives for, among other projects, a CO<sub>2</sub> pipeline).
- c. Ky. Rev. Stat. Ann. § 154.31-020 (West 2018): Makes CO<sub>2</sub> transmission pipeline companies eligible for sales and use tax incentives under the Kentucky Investment Act.

## 10. Louisiana

- a. La. Rev. Stat. Ann. § 30:1101 et seq. (West 2009): “Louisiana Geologic Sequestration of Carbon Dioxide Act.” Section 1102 states that “[t]he geologic storage of carbon dioxide will benefit the citizens of the state and the state's environment by reducing greenhouse gas emissions.” Authorizes Commissioner of Conservation to regulate carbon storage through rules and regulations and provides various directions for the Commissioner. Releases operators from liability after completion of CO<sub>2</sub> injection operations.
- b. La. Rev. Stat. Ann. § 30:209 (West 2008) (amended 2009): Authorizes State Mineral and Energy Board, among other powers, to “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.” Includes as an example “[e]stablishing a contractual agreement for the operation of a carbon dioxide storage facility for the storage and distribution of carbon dioxide for secondary or tertiary recovery operations.”
- c. La. Rev. Stat. Ann. § 30:4 (West 2007): Authorizes Department of Conservation to regulation construction, design, and operation of pipelines transmitting CO<sub>2</sub> to EOR projects.
- d. La. Rev. Stat. Ann. § 633.4 (West 2009): Provides a 50% tax reduction on EOR projects that use anthropogenic carbon dioxide.
- e. La. Admin Code tit. 43, pt. XIX, § 403 (2016): Regulates the injection of CO<sub>2</sub> for EOR operations, including provisions to prevent or correct CO<sub>2</sub> leaks.
- f. La. Admin Code tit. 43, pt. XI, subpt. 4 (amended 2017): Regulates construction, design, and operation of CO<sub>2</sub> transmission pipelines, including detailed regulations on safety and maintenance.

## 11. Maine

- a. Me. Rev. Stat. tit. 38. § 585-K (West 2008): Subsection 4 provides that carbon dioxide that has been “captured and used for a commercial purpose” or “permanently disposed of in geological formations” shall not be counted as emissions for the purpose of the code.

## 12. Massachusetts

- a. Mass. Gen. Laws Ann. ch. 23J § 1 (West 2008) (amended 2009): Carbon capture and sequestration is included in the definition of “clean energy research” that may be supported by Massachusetts Alternative and Clean Energy Investment Trust Fund.

## 13. Michigan

- a. Mich. Comp. L. Ann. § 205.303 (West 2014): Grants a reduced severance tax rate to approved EOR projects using carbon dioxide injection.
- b. Mich. Comp. L. Ann. § 460.1047 (West 2017): Allows power plants to recover costs of constructing and maintaining “advanced cleaner energy systems,” which include, in coal-fired plants, carbon capture and geologic sequestration of 85% or more CO<sub>2</sub> emissions.
- c. Mich. Comp. L. Ann. § 483.3 (West 2014): Authorizes Public Service Commission to regulate CO<sub>2</sub> transmission pipelines.
- d. Mich. Admin. Code. r. 299.9204 (2016): Regulates CO<sub>2</sub> pipelines and injection wells as Class VI injection wells.

## 14. Minnesota

- a. Minn. Stat. Ann. § 116J.437 (West 2008) (amended 2013): “Carbon capture, storage, or sequestration” is included in definition of “green economy.” Provides for actions to promote job training in support of green economy.
- b. Minn. Stat. Ann. § 216H.03 (West 2007) (amended 2017): Excludes CO<sub>2</sub> captured and geologically sequestered for purposes of ban on constructing power plants that contribute to state carbon dioxide emissions.

## 15. Mississippi

- a. Miss. Code Ann. § 53-11-1 et seq. (West 2011): “Mississippi Geologic Sequestration of Carbon Dioxide Act.” Authorizes the State Oil and Gas Board to regulate carbon storage in the state, including by approving carbon storage facilities, regulating the use of carbon dioxide in enhanced oil recovery (EOR), maintaining compliance with Safe Drinking Water Act, and establishing bond or deposit requirements for operators. The legislative findings state, “Geologic

sequestration of carbon dioxide is an emerging industry that has the potential to provide jobs, investment, and other economic opportunities for the people of Mississippi, and is a valuable incentive for Mississippi to attract new industry.”

- b. Miss. Code Ann. § 27-65-19 (2013): Applies a significantly reduced sales tax rate to carbon dioxide sold to EOR projects or permanent geological sequestration. *See also* 32 Miss. Admin. Code Pt. IV, r. 6.01 (same).
- c. Miss. Code Ann. § 11-27-47 (West 1984): Empowers counties to regulate the construction and maintenance of CO<sub>2</sub> transmission pipelines.

## 16. Montana

- a. Mont. Code Ann. § 15-24-3111 (West 2007) (amended 2009): Provides a property tax abatement for coal gasification facilities CCS, as well as carbon dioxide sequestration equipment.
- b. Mont. Code Ann. § 15-6-158 (West 2007) (amended 2015): Provides 3% or lower tax rate for CO<sub>2</sub> sequestration equipment, CO<sub>2</sub> pipelines, and other specified property. (*See also* Mont. Admin. R. 36.22.1707 (2015) (implementing regulation on certifying CCS equipment for reduced tax rate).)
- c. Mont. Code Ann. § 69-8-421 (West 2007): Moratorium on new coal-fired power facilities, unless a facility captures and sequesters a minimum 50% CO<sub>2</sub> emissions, until such time as uniform federal or state standards for CCS are adopted. (*See also* Mont. Admin. R. 38.5.8228(2)(f) (2008) (implementing regulation requiring coal-fired plants to demonstrate 50% CCS in application to Commission).)
- d. Mont. Code Ann. § 69-13-101 et seq. (West 2013): Classifies and regulates CO<sub>2</sub> pipelines as common carriers, and authorizes the Public Service Commission to set rates of charge and promulgate operating rules for CO<sub>2</sub> pipelines.
- e. Mont. Code Ann. § 75-5-401 (West 2009): Exempts CO<sub>2</sub> injection wells from water permit requirements if they are properly permitted under oil and gas code.
- f. Mont. Code Ann. § 82-11-101 et seq. (West 2009): Provides for regulation of CO<sub>2</sub> wells by the Board of Oil and Gas Conservation, contingent on the U.S. EPA’s grant of primacy to administer activities at CO<sub>2</sub> sequestration wells.
  - i. Mont. Code Ann. § 82-11-111 (West 2009): Gives Board exclusive jurisdiction over CO<sub>2</sub> injection wells and geologic storage reservoirs, allowing the Board to issue permits, adopt design standards, and establish measures to prevent contamination, among other things.
  - ii. Mont. Code Ann. § 82-11-123 (West 2009): Specifies standards necessary for operation of CO<sub>2</sub> injection well including monitoring, recordkeeping, labeling and equipment.

- iii. Mont. Code Ann. § 82-11-127 (West 2009): Prohibits operation of a CO<sub>2</sub> well without a permit.
- iv. Mont. Code Ann. § 82-11-137 (West 2009): Requires operating fee for CO<sub>2</sub> injection well.
- v. Mont. Code Ann. § 82-11-183 (West 2009): Authorizes Board to issue completion certificates to wells that have completed injection of CO<sub>2</sub>.
- vi. Mont. Code Ann. 82-11-184 (West 2009): Allows for conversion of EOR well to CO<sub>2</sub> storage well.
- g. Mont. Admin. r. 17.80.201 et seq. (2008) (amended 2011): Provides procedure for qualifying property CCS equipment and pipelines for property tax rates incentivizing geologic CO<sub>2</sub> sequestration.

## **17. New Hampshire**

- a. N.H. Rev. Stat. Ann. § 125-O:22 (West 2008) (amended 2012): Allows electricity distribution companies to recover cost of CCS technologies through service charges.

## **18. New Mexico**

- a. N.M. Stat. Ann. § 7-9G-2 (West 2007) (amended 2009): Provides tax credit incentive for coal-based generating plants achieving 1,100 lbs. CO<sub>2</sub>/MWh, including through carbon capture and sequestration. (*See also* N.M. Stat. Ann. §§ 7-9-114, 7-2-18.25, 7-2A-25 (providing similar tax credits); N.M. Stat. Ann. § 7-9J-4 (providing tax credits for CCS equipment in an IGCC coal plant).)
- b. N.M. Stat. Ann. § 62-6-28 (West 2007): Allows utilities to recover costs incurred for clean energy projects, including coal-based plants using CCS to achieve 1,100 lbs CO<sub>2</sub>/MWh limit.

## **19. New York**

- a. N.Y. Gen. Mun. L. § 959-b (West 2006) (amended 2009): Qualifies clean coal plants using CCS as “clean energy enterprises” eligible for state incentives.

## **20. North Dakota**

- a. N.D. Cent. Code § 17-01-01 (West 2007): Adoption of 25x25 Initiative, which supports use of carbon sequestration as part of effort to get 25% of American energy from America’s renewable natural resources, while continuing to provide adequate food.

- b. N.D. Cent. Code § 38-22-01 et seq. (West 2009): The “Carbon Dioxide and Underground Storage” law’s policy declaration says that it is in the interest of North Dakota to promote geologic storage of carbon dioxide. Other sections provide for permitting procedures and requirements, environmental protection, fees based on tons of CO<sub>2</sub> stored, penalties for noncompliance, and conversion of EOR operations to CO<sub>2</sub> storage.
- c. N.D. Cent. Code § 57-06-17.1 (West 1991) (amended 1997), § 57-39.2-04.14 (West 2015): Exempts CO<sub>2</sub> pipeline property and equipment from utility taxes and sales and use taxes, respectively.
- d. N.D. Cent. Code § 57-60-02.1 (West 2009) (amended 2017): “Coal Conversion Facilities Tax.” Provides a 20%-50% tax credit to coal facilities that capture and store 20%-80% of their CO<sub>2</sub> emissions.
- e. N.D. Admin. Code 43-05-01-01 et seq. (2013): Provides permitting procedures and requirements for geologic storage of carbon dioxide, including environmental mandates, financial responsibility, recordkeeping and reporting. These regulations and the “Carbon Dioxide and Underground Storage” statutes formed the basis of EPA’s approval on April 24, 2018 of North Dakota’s state-administered Class VI underground injection control program.

## 21. Ohio

- a. Ohio Admin. Code r. 3745-51-04(H) (2015): Classifying injection of CO<sub>2</sub> streams for geological storage as Class VI injection wells subject to 40 C.F.R. § 261.4(h).

## 22. Oklahoma

- a. Okla. Stat. tit. 27A, § 3-4-101 et seq. (West 2001) (amended 2011): “Carbon Sequestration Enhancement Act.” Enacted to encourage carbon sequestration in Oklahoma, including via carbon capture and geologic storage, the act creates an inspection and certification program for carbon reserves.
- b. Okla. Stat. tit. 27A, § 3-5-101 et seq. (West 2009) (amended 2011): The “Oklahoma Carbon Capture and Geologic Sequestration Act” gives jurisdiction to the Corporation Commission to oversee CO<sub>2</sub> injections in oil or gas reservoirs and to the Department of Environmental Quality for any other geologic formations. Authorizes the respective agencies to conduct permitting and other regulation for CO<sub>2</sub> storage within their jurisdiction. The legislative findings state: “Storage of carbon dioxide in geological formations is an effective and feasible strategy to deposit, store or sequester large volumes of carbon dioxide over long periods of time.”
- c. Okla. Admin. Code § 155:30-1-1 et seq. (2009): Contains general provisions for voluntary carbon offset program, which may be implemented through geologic CO<sub>2</sub> sequestration, as well as other methods.

- d. Okla. Admin. Code § 155:30-13-1 et seq. (2009): Contains regulations specific to geologic carbon sequestration for carbon offset program, including fees, application requirements, monitoring provisions, and eligibility limitations.

### **23. Pennsylvania**

- a. 71 Pa. Stat. Ann. § 1361.3 (West 2008): Authorizes Department of Environmental Protection to compose report on economic opportunities available to the state due to need for alternative energy, including “carbon sequestration technologies.” (*See also* 66 Pa. Stat. Ann. § 2815 (West 2008) (directing identification and assessment of Pennsylvania geologic formations for sequestration).)

### **24. Tennessee**

- a. Tenn. Comp. R. & Regs. 0400-12-01-.02 (2015): Classifying injection of CO<sub>2</sub> streams for geological storage as Class VI injection wells subject to 40 C.F.R. Parts 144 and 146 and Tennessee underground injection control regulations.

### **25. Texas**

- a. Tex. Nat. Res. Code Ann. § 120.001 et seq. (West 2009) (amended 2015): Creates a program to certify coal- and natural gas-fired plants that capture and sequester 70% CO<sub>2</sub> emissions for a “clean energy project” tax credit under Texas Tax Code § 171.602.
- b. Tex. Nat. Res. Code Ann. § 121.001 et seq. (West 2009) (amended 2011): Provides rules for ownership of CO<sub>2</sub> stored in geologic formations and creates trust fund funded through fees paid by CO<sub>2</sub> storage facility operators, used for monitoring, remediation, enforcement and other activities related to geologic CO<sub>2</sub> storage.
- c. Tex. Tax Code Ann. § 171.602 (West 2009): Provides a tax credit to clean energy projects that sequester at least 70% of CO<sub>2</sub> emissions.
- d. Tex. Tax Code Ann. § 202.0545 (West 2009): Provides a reduced tax rate for EOR projects that use and geologically sequester anthropogenic carbon dioxide. (*See also* Tex. Tax Code Ann. § 151.334 (West 2009) (exempting CCS equipment used in a clean energy project from sales and use taxes, if the captured CO<sub>2</sub> is either used in a local EOR project or sequestered in Texas for at least 1,000 years).)
- e. Tex. Water Code Ann. § 27.041 et seq. (West 2009): Gives jurisdiction over CO<sub>2</sub> injection to Railroad Commission and authorizes the Commission to permit, collect fees for, and prescribe operational standards for CO<sub>2</sub> storage facilities, including proof of “financial responsibility” from facility operators.

- f. Tex. Health & Safety Code Ann. § 382.501 et seq. (West 2009): “Offshore Geologic Storage of Carbon Dioxide.” Authorizes various state agencies to construct an offshore, deep subsurface geologic repository for carbon dioxide on state-owned land.
- g. 16 Tex. Admin. Code § 3.30 (2012): Memorandum of Understanding between the Railroad Commission of Texas and Texas Commission on Environmental Quality, recognizing Railroad Commission’s jurisdiction to regulate carbon dioxide sequestration wells per Texas Water Code § 27.041.
- h. 16 Tex. Admin. Code § 5.201 et seq. (2010), § 5.301 et seq. (2011): Regulates, respectively, the geologic sequestration of anthropogenic CO<sub>2</sub> in reservoirs and the use of anthropogenic CO<sub>2</sub> in EOR projects, with permit criteria and operational standards.
- i. 34 Tex. Admin. Code § 3.326 (2010): Provides tax exemptions for carbon capture and storage equipment and pipelines, if the CO<sub>2</sub> is sequestered in Texas.

## 26. Utah

- a. Utah Code Ann. § 10-19-101 et seq. (West 2008) (amended 2010): “Municipal Electric Utility Carbon Emission Reduction Act.” Requires that a certain portion of electricity supplied by municipal utilities be renewably sourced, with an allowed reduction for fossil-fuel generation that captures and geologically sequesters CO<sub>2</sub>.
- b. Utah Code Ann. § 54-17-601 et seq. (West 2008) (amended 2010): “Carbon Emissions Reductions for Electrical Corporations.” Requires that a certain portion of electricity supplied by utilities be low- or no-emission electricity to the extent it is cost effective, including via carbon capture and storage.
- c. Utah Code Ann. § 54-17-701 (West 2008) (amended 2015): Directs various state agencies to recommend rules on permitting and operational standards for of CO<sub>2</sub> storage oversight.
- d. Utah Admin. Code r. R315-261-1 (2016): Classifying injection of CO<sub>2</sub> streams for geological sequestration as Class VI injection wells subject to Utah underground injection control regulations.

## 27. Vermont

- a. Vermont Admin. Code r. 16-3-303:11-201 (2014): Classifying injection of CO<sub>2</sub> streams for geological sequestration as Class VI injection wells subject to Vermont underground injection control regulations.

## 28. Virginia

- a. Va. Code Ann. § 56-585.1 (West 2007) (amended 2018): Allows enhanced cost recovery through utility rate adjustments for the construction of “carbon capture

compatible, clean-coal powered” power plants.

## 29. Washington

- a. Wash. Rev. Code Ann. § 80.70.010 et seq. (West 2004): Requires that newly proposed fossil fuels power plants include a carbon dioxide mitigation plan, which include a carbon capture and storage mechanism.
- b. Wash. Rev. Code Ann. § 80.80.030 (West 2007): Requires Governor to develop policy recommendations on methods to meet greenhouse gas reduction goals, including carbon capture and storage.
- c. Wash. Rev. Code Ann. § 80.80.040 (West 2007) (amended 2011): Institutes fossil-fueled generating plant emissions performance standard of 1,100 lbs CO<sub>2</sub>/MWh that may be met in part through carbon capture and storage, including geologic sequestration.
- d. Wash. Admin. Code § 173-218-115 (2008): Contains permitting and regulatory requirements for carbon dioxide injection wells used for geological sequestration.
- e. Wash. Admin. Code § 173-407-100 et seq. (2008): Requires fossil-fueled thermal electric generating facilities of 25-350 MW capacity to implement CO<sub>2</sub> mitigation program, including through geologic or non-geologic sequestration. Limits CO<sub>2</sub> emissions to 1,100 lbs. CO<sub>2</sub>/MWh from July 2008 – March 2018, then to 970 lbs. CO<sub>2</sub>/MWh after March 2018.
- f. Wash. Admin. Code § 463-80-010 et seq. (2008): Implements carbon dioxide mitigation program for thermal electric generating facilities of greater than 350 MW capacity, and allows mitigation through geological carbon sequestration.

## 30. West Virginia

- a. W. Va. Code Ann. § 22-11A-1 et seq. (West 2009): “Carbon Dioxide Sequestration.” Establishes legal and regulatory framework for permitting of CO<sub>2</sub> sequestration sites. Empowers Dept. of Environmental Protection to permit and monitor carbon sequestration sites.
- b. W. Va. Code Ann. § 18B-1B-12 (West 2004): Creates research challenge fund to support research into coal technology, including carbon sequestration.

## 31. Wisconsin

- a. Wi. Stat. Ann. § 285.78 (1999): Creates a registry for persons to record voluntary greenhouse gas emissions reductions, through either carbon sequestration or energy efficiency measures, to show compliance with future state or federal limits. (*See also* Wi. Admin. Code § NR.437.01 *et seq.* (2002) (implementing regulations).)

## 32. Wyoming

- a. Wyo. Stat. Ann. § 30-5-502 (West 2015): Provides for Oil & Gas Conservation Commission to certify geologic CO<sub>2</sub> sequestration incidental to EOR operations.
- b. Wyo. Stat. Ann. § 34-1-152 (West 2008) (amended 2009), § 34-1-153 (West 2009): Resolves ownership of pore space under surfaces and ownership of CO<sub>2</sub> injected into pore space, for purposes of geologic sequestration.
- c. Wyo. Stat. Ann. § 35-11-313 *et seq.* (West 2008) (amended 2016): Requires permits for geologic CO<sub>2</sub> sequestration and creates special revenue account for deposit of permitting fees. Directs the Department of Environmental Quality to develop rules for operational standards, monitoring, and maintenance of injection wells.
- d. Wyo. R. & Regs. 055.0001.3 § 43 (2010) (amended 2016): Implements procedures for application and pooling of pore space to organize and operate a carbon dioxide geologic sequestration site.
- e. Wyo. R. & Regs. 020.0011.24 § 1 *et seq.* (2016): Creates operating standards, permitting procedures, and reporting and monitoring requirements for Class VI injection wells for the geologic sequestration of carbon dioxide.

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## **STATUTES AND REGULATIONS BY SUBJECT AREA**

### **I. Permitting / Monitoring Rules and Procedures for CCS**

#### **1. Alabama**

- a. Ala. Admin Code r. 335-6-8-.01 et seq. (2011) (amended 2015): Regulations for permitting, operating, and monitoring underground injection wells, including wells for permanent storage of carbon dioxide.

#### **2. Illinois**

- a. 220 Ill. Comp. Stat. Ann. § 75/1 et seq. (West 2011): “Carbon Dioxide Transportation and Sequestration Act.” Regulates the construction of pipelines to transport carbon dioxide to sequestration and enhanced oil recovery, as “critical to the promotion and use of Illinois coal.”
- b. 415 Ill. Comp. Stat. Ann. 5/13.7 (West 2011): Allows for inspection of carbon sequestration sites by IL EPA for water quality control purposes.
- c. Ill. Admin Code tit. 35, § 730, subpart H (2012) (amended 2018): Establishes criteria and standards for Class VI CO<sub>2</sub> geologic sequestration injection wells.
- d. Ill. Admin. Code tit. 83, 302.40 (2013) (amended 2014): Regulates the negotiation of easements by pipeline companies for development of a CO<sub>2</sub> pipeline from clean coal facilities to sequestration.

#### **3. Indiana**

- a. Ind. Code § 14-39-1-1 et seq. (West 2011): “Eminent Domain for Transportation of Carbon Dioxide by Pipeline” grants certified CO<sub>2</sub> pipeline company authority to condemn a right-of-way for construction of pipelines to transport CO<sub>2</sub> to EOR, deep saline injection, or sequestration, inside or outside Indiana.

#### **4. Kentucky**

- a. Ky. Rev. Stat. Ann. § 353.800 et seq. (West 2011): The “Geologic Storage of Carbon Dioxide” subsection of the Mines and Minerals Code states an explicit “economic priority” to attract CCS projects “that will create jobs ... and favorably position the Commonwealth for future leadership and growth in the field.” Other provisions relate to rights to ownership of pore space where carbon dioxide could be stored in geologic formations and monitoring requirements for sites where carbon dioxide has been stored.

## 5. Louisiana

- a. La. Rev. Stat. Ann. § 30:1101 et seq. (West 2009): “Louisiana Geologic Sequestration of Carbon Dioxide Act.” Section 1102 states that “[t]he geologic storage of carbon dioxide will benefit the citizens of the state and the state's environment by reducing greenhouse gas emissions.” Authorizes Commissioner of Conservation to regulate carbon storage through rules and regulations and provides various directions for the Commissioner. Releases operators from liability after completion of CO<sub>2</sub> injection operations.
- b. La. Rev. Stat. Ann. § 30:4 (West 2007): Authorizes Department of Conservation to regulate construction, design, and operation of pipelines transmitting CO<sub>2</sub> to EOR projects.
- c. La. Admin Code tit. 43, pt. XIX, § 403 (2016): Regulates the injection of CO<sub>2</sub> for EOR operations, including provisions to prevent or correct CO<sub>2</sub> leaks.
- d. La. Admin Code tit. 43, pt. XI, subpt. 4 (last amended 2017): Regulates the construction, design, and operation of CO<sub>2</sub> transmission pipelines, including detailed regulations on safety and maintenance.

## 6. Michigan

- a. Mich. Comp. L. Ann. § 483.3 (West 2014): Authorizes Public Service Commission to regulate CO<sub>2</sub> transmission pipelines.
- b. Mich. Admin. Code. r. 299.9204 (2016): Regulates CO<sub>2</sub> pipelines and injection wells as Class VI injection wells.

## 7. Mississippi

- a. Miss. Code Ann. § 53-11-1 et seq. (West 2011): “Mississippi Geologic Sequestration of Carbon Dioxide Act.” Authorizes the State Oil and Gas Board to regulate carbon storage in the state, including by approving carbon storage facilities, regulating the use of carbon dioxide in enhanced oil recovery (EOR), maintaining compliance with Safe Drinking Water Act, and establishing bond or deposit requirements for operators. The legislative findings state, “Geologic sequestration of carbon dioxide is an emerging industry that has the potential to provide jobs, investment, and other economic opportunities for the people of Mississippi, and is a valuable incentive for Mississippi to attract new industry.”
- b. Miss. Code Ann. § 11-27-47 (West 1984): Empowers counties to regulate the construction and maintenance of CO<sub>2</sub> transmission pipelines.

## 8. Montana

- a. Mont. Code Ann. § 82-11-101 et seq. (West 2009): Provides for regulation of CO<sub>2</sub> wells by the Board of Oil and Gas conservation, contingent on the U.S. EPA's grant of primacy to administer activities at CO<sub>2</sub> sequestration wells.
  - i. Mont. Code Ann. § 82-11-111 (West 2009): Gives Board exclusive jurisdiction over CO<sub>2</sub> injection wells and geologic storage reservoirs, allowing the Board to issue permits, adopt design standards, and establish measures to prevent contamination, among other things.
  - ii. Mont. Code Ann. § 82-11-123 (West 2009): Specifies standards necessary for operation of CO<sub>2</sub> injection well including monitoring, recordkeeping, labeling and equipment.
  - iii. Mont. Code Ann. § 82-11-127 (West 2009): Prohibits operation of a CO<sub>2</sub> well without a permit.
  - iv. Mont. Code Ann. § 82-11-137 (West 2009): Requires operating fee for injection well.
  - v. Mont. Code Ann. § 82-11-183 (West 2009): Authorizes Board to issue completion certificates to wells that have completed injection of CO<sub>2</sub>.
  - vi. Mont. Code Ann. 82-11-184 (West 2009): Allows for conversion of EOR well to CO<sub>2</sub> storage well.
- b. Mont. Code Ann. § 69-13-101 et seq. (West 2013): Classifies and regulates CO<sub>2</sub> pipelines as common carriers, and authorizes the Public Service Commission to set rates of charge and promulgate operating rules for CO<sub>2</sub> pipelines.

## 9. North Dakota

- a. N.D. Cent. Code § 38-22-01 et seq. (West 2009): The "Carbon Dioxide and Underground Storage" law's policy declaration says that it is in the interest of North Dakota to promote geologic storage of carbon dioxide. Other sections provide for permitting procedures and requirements, environmental protection, fees based on tons of CO<sub>2</sub> stored, penalties for noncompliance, and conversion of EOR operations to CO<sub>2</sub> storage.
- b. N.D. Admin. Code 43-05-01-01 et seq. (2013): Provides permitting procedures and requirements for geologic storage of carbon dioxide, including environmental mandates, financial responsibility, recordkeeping and reporting.

## 10. Ohio

- a. Ohio Admin. Code r. 3745-51-04(H) (2015): Classifying injection of CO<sub>2</sub> streams for geological storage as Class VI injection wells subject to 40 C.F.R. § 261.4(h).

## 11. Oklahoma

- a. Okla. Stat. tit. 27A, § 3-5-101 et seq. (West 2009) (amended 2011): The “Oklahoma Carbon Capture and Geologic Sequestration Act” gives jurisdiction to the Corporation Commission to oversee CO<sub>2</sub> injections in oil or gas reservoirs and to the Department of Environmental Quality for any other geologic formations. Authorizes the respective agencies to conduct permitting and other regulation for CO<sub>2</sub> storage within their jurisdiction. The legislative findings state: “Storage of carbon dioxide in geological formations is an effective and feasible strategy to deposit, store or sequester large volumes of carbon dioxide over long periods of time.”
- b. Okla. Admin. Code § 155:30-13-1 et seq. (2009): Contains regulations specific to geologic carbon sequestration for carbon offset program, including fees, application requirements, monitoring provisions, and eligibility limitations.

## 12. Tennessee

- a. Tenn. Comp. R. & Regs. 0400-12-01-.02 (2015): Classifying injection of CO<sub>2</sub> streams for geological storage as Class VI injection wells subject to 40 C.F.R. Parts 144 and 146 and Tennessee underground injection control regulations.

## 13. Texas

- a. Tex. Nat. Res. Code Ann. § 121.001 et seq. (West 2009) (amended 2011): Provides rules for ownership of CO<sub>2</sub> stored in geologic formations and creates trust fund funded through fees paid by CO<sub>2</sub> storage facility operators, used for monitoring, remediation, enforcement and other activities related to geologic CO<sub>2</sub> storage.
- b. Tex. Water Code Ann. § 27.041 et seq. (West 2009): Gives jurisdiction over CO<sub>2</sub> injection to Railroad Commission and authorizes the Commission to permit, collect fees for, and prescribe operational standards for CO<sub>2</sub> storage facilities, including proof of “financial responsibility” from facility operators.
- c. 16 Tex. Admin. Code § 3.30 (2012): Memorandum of Understanding between the Railroad Commission of Texas and Texas Commission on Environmental Quality, recognizing Railroad Commission’s jurisdiction to the regulate carbon dioxide sequestration wells per Texas Water Code § 27.041.
- d. 16 Tex. Admin. Code § 5.201 et seq. (2010), § 5.301 et seq. (2011): Regulates, respectively, the geologic sequestration of anthropogenic CO<sub>2</sub> in reservoirs and

the use of anthropogenic CO<sub>2</sub> in EOR projects, with permit criteria and operational standards.

#### **14. Utah**

- a. Utah Admin. Code r. R315-261-1 (2016): Classifying injection of CO<sub>2</sub> streams for geological sequestration as Class VI injection wells subject to Utah underground injection control regulations.

#### **15. Vermont**

- a. Vermont Admin. Code r. 16-3-303:11-201 (2014): Classifying injection of CO<sub>2</sub> streams for geological sequestration as Class VI injection wells subject to Vermont underground injection control regulations.

#### **16. Washington**

- a. Wash. Admin. Code § 173-218-115 (2008): Contains permitting and regulatory requirements for carbon dioxide injection wells used for geological sequestration.

#### **17. West Virginia**

- a. W. Va. Code Ann. § 22-11A-1 et seq. (West 2009): “Carbon Dioxide Sequestration.” Establishes legal and regulatory framework for permitting of CO<sub>2</sub> sequestration sites. Empowers Dept. of Environmental Protection to permit and monitor carbon sequestration sites.

#### **18. Wyoming**

- a. Wyo. Stat. Ann. § 30-5-502 (West 2015): Provides for Oil & Gas Conservation Commission to certify geologic CO<sub>2</sub> sequestration incidental to EOR operations.
- b. Wyo. Stat. Ann. § 34-1-152 (West 2008) (amended 2009), § 34-1-153 (West 2009): Resolves ownership of pore space under surfaces and ownership of carbon dioxide injected into pore space, for purposes of geologic sequestration.
- c. Wyo. Stat. Ann. § 35-11-313 et seq. (West 2008) (amended 2016): Requires permits for geologic sequestration of CO<sub>2</sub> and creates special revenue account for deposit of fees from permitting. Directs the Department of Environmental Quality to develop rules for operational standards, monitoring, and maintenance of injection wells.
- d. Wyo. R. & Regs. 055.0001.3 § 43 (2010) (amended 2016): Implements procedures for application and pooling of pore space to organize and operate a carbon dioxide geologic sequestration site.

- e. Wyo. R. & Regs. 020.0011.24 § 1 et seq. (2016): Creates operating standards, permitting procedures, and reporting and monitoring requirements for Class VI injection wells for the geologic sequestration of carbon dioxide.

## **II. Recognizing Power Plants with CCS Under Low-Carbon Energy Laws**

### **1. California**

- a. Cal. Code Regs. tit. 17, § 95486 (2010) (amended 2019): California’s Low Carbon Fuel Standard incorporates credits for carbon capture and storage implemented in the fuel refinement process in determining a fuel’s carbon intensity.
- b. Cal. Code Regs. tit. 17, § 95852(g) (2012) (amended 2015): Carbon dioxide suppliers are regulated under California’s cap-and-trade program, but any carbon dioxide supplied that is ultimately geologically sequestered is not included in their compliance obligation (e.g., carbon dioxide supplied for enhanced oil recovery).
- c. Cal. Code Regs. tit. 20, § 2904 (2007): Carbon dioxide that is sequestered is not included in the CO<sub>2</sub> emissions compliance obligation for power plants.

### **2. Florida**

- a. Fla. Stat. § 366.91 (West 2008) (amended 2010): Includes “electrical energy produced using pipeline-quality synthetic gas produced from waste petroleum coke with carbon capture and sequestration” in definition of “renewable energy” and requires utilities to offer to purchase renewable energy.

### **3. Illinois**

- a. 20 Ill. Comp. Stat. Ann. 3855/1-75 (West 2009) (amended 2018): Subsection (d) requires a 5% clean coal portfolio standard for utilities and sets parameters for so-called “initial clean coal plants” that include at least 50% carbon capture and sequestration.
- b. 415 Ill. Comp. Stat. Ann. 5/9.10 (West 2001): Includes carbon sequestration as potential method for generation of voluntary emissions reduction credits.
- c. 220 Ill. Comp. Stat. Ann. 5/16-115 (West 2009) (amended 2015): In order to supply electricity to alternative retail electric suppliers as part of their renewable energy portfolios, clean coal facilities must either sequester 50% of CO<sub>2</sub> emissions or purchase offsets to cover any drop of the total emissions sequestered below 50%.
- d. Ill. Admin. Code tit. 83, Part 455 (2017): Prescribes standards for complying with renewable energy portfolio standard, including clean coal standard of 50% sequestration.

#### **4. Maine**

- a. Me. Rev. Stat. tit.38. § 585-K (West 2008): Subsection 4 provides that carbon dioxide that has been “captured and used for a commercial purpose” or “permanently disposed of in geological formations” shall not be counted as emissions for the purpose of the code.

#### **5. Massachusetts**

- a. Mass. Gen. Laws Ann. ch. 23J § 1 (West 2008) (amended 2009): Carbon capture and sequestration is included in the definition of “clean energy research” which may be supported by Massachusetts Alternative and Clean Energy Investment Trust Fund, which is created by this chapter.

#### **6. Minnesota**

- a. Minn. Stat. Ann. § 116J.437 (West 2008) (amended 2013): “Carbon capture, storage, or sequestration” is included in definition of “green economy.” Provides for actions to promote job training in support of green economy.
- b. Minn. Stat. Ann. § 216H.03 (West 2007) (amended 2017): Excludes CO<sub>2</sub> captured and geologically sequestered for purposes of ban on constructing power plants that contribute to state carbon dioxide emissions.

#### **7. Montana**

- a. Mont. Code Ann. § 69-8-421 (West 2007): Moratorium on new coal-fired power facilities, unless a facility captures and sequesters a minimum 50% CO<sub>2</sub> emissions, until such time as uniform federal or state standards for CCS are adopted. *See also* Mont. Admin. R. 38.5.8228(2)(f) (2008) (implementing regulation requiring coal-fired plants to demonstrate 50% CCS in application to Commission).

#### **8. New York**

- a. N.Y. Gen. Mun. L. § 959-b (West 2006) (amended 2009): Qualifies clean coal plants using CCS as “clean energy enterprises” eligible for state incentives.

#### **9. Oklahoma**

- a. Okla. Admin. Code § 155:30-1-1 *et seq.* (2009): Contains general provisions for voluntary carbon offset program which may be implemented through geologic sequestration of carbon as well as other methods.

#### **10. Utah**

- a. Utah Code Ann. § 10-19-101 *et seq.* (West 2008) (amended 2010): “Municipal Electric Utility Carbon Emission Reduction Act.” Requires that a certain portion of

electricity supplied by municipal utilities be renewably sourced, with an allowed reduction for fossil-fuel generation that captures and geologically sequesters CO<sub>2</sub>.

- b. Utah Code Ann. § 54-17-601 et seq. (West 2008) (amended 2010): “Carbon Emissions Reductions for Electrical Corporations.” Requires that a certain portion of electricity supplied by utilities be low- or no-emission electricity to the extent it is cost effective, including via carbon capture and storage.

## 11. Washington

- a. Wash. Rev. Code Ann. § 80.70.010 et seq. (West 2004): Requires that newly proposed fossil fuels power plants include a carbon dioxide mitigation plan, which include a carbon capture and storage mechanism.
- b. Wash. Rev. Code Ann. § 80.80.040 (West 2007) (amended 2011): Institutes fossil-fueled generating plant emissions performance standard of 1,100 lbs. CO<sub>2</sub>/MWh that may be met in part through carbon capture and storage, including geologic sequestration.
- c. Wash. Admin. Code § 173-407-101 et seq. (2008): Requires fossil-fueled thermal electric generating facilities of 25-350 MW capacity to implement CO<sub>2</sub> mitigation program, including through geologic or non-geologic sequestration. Limits CO<sub>2</sub> emissions to 1,100 lbs. CO<sub>2</sub>/MWh from July 2008 – March 2018, then to 970 lbs. CO<sub>2</sub>/MWh after March 2018.
- d. Wash. Admin. Code § 463-80-010 et seq. (2008): Implements carbon dioxide mitigation program for thermal electric generating facilities of greater than 350 MW capacity, and allows mitigation through geological carbon sequestration.

## 12. Wisconsin

- a. Wi. Stat. Ann. § 285.78 (1999): Creates a registry for persons to record voluntary greenhouse gas emissions reductions, through either carbon sequestration or energy efficiency measures, to show compliance with future state or federal limits. (*See also* Wi. Admin. Code § NR.437.01 et seq. (2002) (implementing regulations).)

## III. Allowing Cost Recovery

### 1. Colorado

- a. Colo. Rev. Stat. § 40-2-123 (West 2006) (amended 2017): Provides framework for utility applications to build integrated gasification combined cycle plants with carbon capture capabilities and allows waiver of utility commission’s “rules requiring competitive resource acquisition” upon proper demonstration by utility. § 40-2-123(2)(f) allows full cost recovery from ratepayers for IGCC plants with carbon capture.

## **2. Florida**

- a. Fla. Stat. § 366.8255 (West 2008) (amended 2012): Allows inclusion of “[c]osts or expenses prudently incurred for scientific research and geological assessments of carbon capture and storage” in utilities’ environmental compliance costs which may be recovered from ratepayers.

## **3. Illinois**

- a. 20 Ill. Comp. Stat. Ann. § 687/6-5 (West 2007) (amended 2019): Provides funds from a ratepayer “Renewable Energy Resources and Coal Technology Development Assistance Charge” for capturing and sequestering CO<sub>2</sub> from coal combustion, and supporting research on CCS technology.

## **4. Iowa**

- a. Iowa Code Ann. § 476.53 (West 2010) (amended 2018): Includes addition of carbon capture facility as significant alteration whose costs can be recovered from ratepayers.

## **5. Michigan**

- a. Mich. Comp. L. Ann. § 460.1047 (West 2017): Allows power plants to recover costs of constructing and maintaining “advanced cleaner energy systems,” which include, in coal-fired plants, carbon capture and geologic sequestration of 85% or more CO<sub>2</sub> emissions.

## **6. New Hampshire**

- a. N.H. Rev. Stat. Ann. § 125-O:22 (West 2008) (amended 2012): Allows electricity distribution companies to recover cost of CCS technologies through service charges.

## **7. New Mexico**

- a. N.M. Stat. Ann. § 62-6-28 (West 2007): Allows utilities to recover costs incurred for clean energy projects, including coal-based plants using CCS to achieve 1,100 lbs. CO<sub>2</sub>/MWh limit.

## **8. Virginia**

- a. Va. Code Ann. § 56-585.1 (West 2007) (amended 2018): Allows enhanced cost recovery through utility rate adjustments for the construction of “carbon capture compatible, clean-coal powered” power plants.

#### **IV. Proving Grants or Tax Incentives**

##### **1. Colorado**

- a. Colo. Rev. Stat. § 25-1-1303 (West 2006): In 2006, provided \$50,000 grant to the Colorado School of Mines to research “geologic carbon sequestration as technique for mitigating the emissions of greenhouse gases in the state.”

##### **2. Illinois**

- a. 20 Ill. Comp. Stat. Ann. 3855/1-80 (West 2007) (amended 2016): Authorizes Illinois Power Agency to “develop, finance, construct, or operate” clean coal power plants and carbon sequestration facilities using Agency bonds.
- b. 20 Ill. Comp. Stat. Ann. § 687/6-5 (West 2007) (amended 2019): Provides funds from a ratepayer “Renewable Energy Resources and Coal Technology Development Assistance Charge” for capturing and sequestering CO<sub>2</sub> from coal combustion, and supporting research on CCS technology.
- c. 20 Ill. Comp. Stat. Ann. § 3501/825-65 (West 2010) (amended 2018): Authorizes state bonds to fund construction of clean coal plants using CCS.

##### **3. Indiana**

- a. Ind. Code § 8-1-8.8-12 (West 2011): “Utility Generation and Clean Coal Technology” subsection of Utilities and Transportation Code. The subsection provides financial incentives for utilities building ‘new energy’ generators, including CCS coal plants.

##### **4. Iowa**

- a. Iowa Admin. Code r. 261-401.6 (2011): Makes energy projects implementing carbon capture and storage eligible for financial assistance.

##### **5. Kansas**

- a. Kan. Stat. Ann. § 79-233 (West 2007): Exempts “any carbon dioxide capture, sequestration or utilization property,” including equipment, injection wells, and electric generation units with 100% carbon capture, from property taxes.
- b. Kan. Stat. Ann. § 79-32,256 (West 2007): Provides tax deduction for CCS equipment.

##### **6. Kentucky**

- a. Ky. Rev. Stat. Ann. § 154.27-010 et seq. (West 2007) (amended 2011): “Incentives for Energy Independence Act.” Provides incentives, including income and sales tax credits up to 100%, for carbon capture-ready projects,

defined as those built with “planning for or anticipating capture of carbon dioxide in a manner to facilitate continued operation of the facility in compliance with applicable federal requirements.” (*See also* Ky. Rev. Stat. Ann. § 143.31-010 *et seq.* (2018) (providing tax incentives for, among other projects, a CO<sub>2</sub> pipeline).)

- b. Ky. Rev. Stat. Ann. § 154.31-020 (West 2018): Makes CO<sub>2</sub> transmission pipeline companies eligible for sales and use tax incentives under the Kentucky Investment Act.

## 7. Louisiana

- a. La. Rev. Stat. Ann. § 30:209 (West 2008) (amended 2009): Authorizes State Mineral and Energy Board, among other powers, to “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.” Includes as an example “[e]stablishing a contractual agreement for the operation of a carbon dioxide storage facility for the storage and distribution of carbon dioxide for secondary or tertiary recovery operations.”
- b. La. Rev. Stat. Ann. § 633.4 (West 2009): Provides a 50% tax reduction on EOR projects that use anthropogenic carbon dioxide.

## 8. Michigan

- a. Mich. Comp. L. Ann. § 205.303 (West 2014): Grants a reduced severance tax rate to approved EOR projects using carbon dioxide injection.

## 9. Mississippi

- a. Miss. Code Ann. § 27-65-19 (2013): Applies a significantly reduced sales tax rate to carbon dioxide sold to EOR projects or permanent geological sequestration. *See also* 32 Miss. Admin. Code Pt. IV, r. 6.01 (same).

## 10. Montana

- a. Mont. Code Ann. § 15-24-3111 (West 2007) (amended 2009): Provides a property tax abatement for coal gasification facilities with carbon capture and sequestration, as well as carbon dioxide sequestration equipment.
- b. Mont. Code Ann. § 15-6-158 (West 2007) (amended 2015): Provides 3% or lower tax rate for CO<sub>2</sub> sequestration equipment, carbon dioxide pipelines, and other specified property. (*See also* Mont. Admin. R. 36.22.1707 (2015) (implementing regulation on certifying CCS equipment for reduced tax rate).)
- c. Mont. Code Ann. § 75-5-401 (West 2009): Exempts CO<sub>2</sub> injection wells from water permit requirements if they are properly permitted under oil and gas code.

- d. Mont. Admin. r. 17.80.201 et seq. (2011): Provides procedure for qualifying CO<sub>2</sub> sequestration equipment and pipelines for property tax rates incentivizing geologic CO<sub>2</sub> sequestration.

## 11. New Mexico

- a. N.M. Stat. Ann. § 7-9G-2 (West 2007) (amended 2009): Provides tax credit incentive for coal-based generating plants achieving 1,100 lbs. CO<sub>2</sub>/MWh, including through carbon capture and sequestration. (*See also* N.M. Stat. Ann. §§ 7-9-114, 7-2-18.25, 7-2A-25 (providing similar tax credits); N.M. Stat. Ann. § 7-9J-4 (providing tax credits for CCS equipment in an IGCC coal plant).)

## 12. North Dakota

- a. N.D. Cent. Code § 57-60-02.1 (West 2009) (amended 2017): “Coal Conversion Facilities Tax.” Provides a 20%-50% tax credit to coal facilities that capture and store 20%-80% of their CO<sub>2</sub> emissions.
- b. N.D. Cent. Code § 57-06-17.1 (West 1991) (amended 1997), § 57-39.2-04.14 (West 2015): Exempts CO<sub>2</sub> pipeline property and equipment from utility taxes and sales and use taxes, respectively.

## 13. Oklahoma

- a. Okla. Stat. tit. 27A, § 3-4-101 et seq. (West 2001) (amended 2011): “Carbon Sequestration Enhancement Act.” Enacted to encourage carbon sequestration in Oklahoma, including via carbon capture and geologic storage, the act creates an inspection and certification program for carbon reserves.

## 14. Texas

- a. Tex. Health & Safety Code Ann. § 382.501 et seq (West 2009): “Offshore Geologic Storage of Carbon Dioxide.” Authorizes various state agencies to construct an offshore, deep subsurface geologic repository for carbon dioxide on state-owned land.
- b. Tex. Tax Code Ann. § 171.602 (West 2009): Provides a tax credit to clean energy projects that sequester at least 70% of CO<sub>2</sub> emissions.
- c. Tex. Tax Code Ann. § 202.0545 (West 2009): Provides a reduced tax rate for EOR projects that use and geologically sequester anthropogenic carbon dioxide. (*See also* Tex. Tax Code Ann. § 151.334 (West 2009) (exempting CCS equipment used in a clean energy project from sales and use taxes, if the captured CO<sub>2</sub> is either used in a local EOR project or sequestered in Texas for at least 1,000 years).)
- d. 34 Tex. Admin. Code § 3.326 (2010): Provides tax exemptions for carbon capture and storage equipment.

## 15. West Virginia

- a. W. Va. Code Ann. § 18B-1B-12 (West 2004): Creates research challenge fund to support research into coal technology, including carbon sequestration.

**Summary Table**

|   | AL | CA | CO | FL | IL | IN | IA | KS | KY | LA | ME | MA | MI | MN | MS | MT | NH | NM | NY | ND | OH | OK | PA | TN | TX | UT | VT | VA | WA | WV | WI | WY |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| I. Regulates CCS operations                                 | •  |    |    |    | •  | •  |    |    | •  | •  |    |    | •  |    | •  | •  |    |    |    | •  | •  | •  |    | •  | •  | •  | •  |    | •  | •  |    | •  |
| Regulates injection wells                                   | •  |    |    |    | •  |    |    |    | •  | •  |    |    | •  |    | •  | •  |    |    |    | •  | •  | •  |    | •  | •  | •  | •  |    | •  | •  |    | •  |
| Regulates pipelines   |    |    |    |    | •  | •  |    |    |    | •  |    |    | •  |    | •  | •  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| II. Recognizes CCS under low carbon laws                    |    | •  |    | •  | •  |    |    |    |    |    | •  | •  |    | •  |    | •  |    |    | •  |    |    | •  |    |    |    | •  |    |    | •  |    | •  |    |
| Voluntary offset programs                                   |    |    |    |    | •  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | •  |    |    |    |    |    |    |    | •  |    |    |
| III. Allows cost recovery                                   |    |    | •  | •  | •  |    | •  |    |    |    |    |    | •  |    |    |    | •  | •  |    |    |    |    |    |    |    |    |    | •  |    |    |    |    |
| IV. Grants or tax incentives                                |    |    | •  |    | •  | •  | •  | •  | •  | •  |    |    | •  |    | •  | •  |    | •  |    | •  |    | •  |    |    | •  |    |    |    |    | •  |    |    |
| Incentives for construction of new CCS facility or pipeline |    |    |    |    | •  | •  |    |    | •  | •  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | •  |    |    |    |    |    |    |    |
| Incentives based on emission limits or capture rates        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | •  |    | •  |    |    |    |    | •  |    |    |    |    |    |    |    |
| Direct public investment in CCS facilities                  |    |    |    |    | •  |    |    |    |    | •  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | •  |    |    |    |    |    |    |    |