

# **Overview of State Carbon Capture and Sequestration Initiatives**

**by**

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**Regulation of CO<sub>2</sub> Emissions from Power Plants**

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# BACKGROUND

- President has placed nation on a path towards constraining CO<sub>2</sub> emissions
- 111(b) new source proposal for EGUs assumes CCS to be “adequately demonstrated”
- Part of controversy over finding of adequate demonstration relates application of Energy Policy Act of 2005 to facilities receiving DOE assistance
- 111(d) proposal for existing EGU’s not expected to apply CCS
- In the meantime states are proceeding independently to advance CCS/CCUS creating implications for future rulemakings

# OVERVIEW

- Survey of state CCS programs
- Conducted October 28 through November 8, 2013
- Questions examined for each state:
  1. Primacy to implement the Class VI UIC (CCS) wells?
  2. Specify what property rights must be secured for CCS?
  3. Streamlined process for taking property rights for CCS?
  4. Requirements for the long-term care of CCS?
  5. Streamlined process for siting CCS pipelines?

# SURVEY HIGHLIGHTS

- None of the states have yet received delegation of the Class VI UIC program although North Dakota may be the first to do so.
- 37 states have not specifically addressed any of the remaining 4 questions.
- Of the remaining 13 states, some states address only the pipeline questions while others address all of the 4 remaining questions.

# CLASS VI PRIMACY

- Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) program.
- Six classes of wells:
  - Class I - industrial and municipal wastes;
  - Class II - oil and gas;
  - Class III - solution mining;
  - Class IV - wastes above drinking water
  - Class V - all other
  - Class VI - CO<sub>2</sub>/CCS .

# CLASS VI PRIMACY

- Final Class VI rules - December 2010,
- Applicability: long-term storage of CO<sub>2</sub> (EOR covered by Class II)
- Requirements: permitting, geologic site characterization, area of review, corrective action, financial responsibility, well construction, operation, mechanical integrity testing, monitoring, well plugging, post-injection site care, and site closure
- Does not address pore space rights and long-term liability.
- Delegation to each state

# CLASS VI PRIMACY

- None of the states yet have primacy for Class VI
- Some states have taken steps to gain primacy.
  - Alabama: adopted rules in 2013 for Class VI enhanced oil or mineral recovery and experimental injection wells.
  - Montana: SB 498 (2009) provides a framework implementing Class VI.
  - Wyoming: finalized Class VI UIC rules (2010).
  - North Dakota: submitted primacy application in 2013; awaiting final approval.

# PROPERTY RIGHTS

- Central question: pore space ownership by surface vs. mineral interest.
- Related question: whether owner has a “protectable interest” in the pore space. *United States v. Causby* 328 U.S. 256 (1946)
- Categories of property rights
  - Subsurface trespass
  - Saline aquifers
  - Depleted coal, oil, and gas formations
  - Natural gas storage formations



# PROPERTY RIGHTS

- Illinois: CCS property rights law applies only to FutureGen; otherwise necessary to acquire all property rights necessary.
- Kentucky: KY ST § 353.806 requires “the storage operator to negotiate with the pore space owners and acquire rights needed to access the pore space.” Mineral owner continues to own the pore space after all minerals have been extracted.
- Louisiana: CCS operator may acquire surface and subsurface rights and property interests necessary or useful La. Stat. Ann. § 30:1107(A).

# PROPERTY RIGHTS

- Mississippi: Requires at least a majority interest in surface and subsurface interest in the property must consent in writing. Mississippi Code § 53-11-9 and 11.
- Montana: Must have at least the consent of the owner of pore space. Montana H.B. 498 presumes that ownership of storage reservoirs attach to surface ownership.
- New York: Case law indicates surface owner to be the owner of the pore space. See *Miles v. Home Gas Co.*, 35 A.D.2d 1042 (N.Y. App. Div. 1970).

# PROPERTY RIGHTS

- North Dakota: Good-faith effort to obtain the consent of all persons who own the storage reservoir's pore space. Must obtain the consent of at least sixty percent (60%) of the ownership of the storage reservoir's pore space. The presumption in North Dakota is that the surface owner owns the pore space.
- Oklahoma: Case law indicates that the surface rights owner can grant a lease for underground storage. See *Ellis v. Arkansas Louisiana Gas Company*, 450 F. Supp. 412 (N.D. Okla. 1978).

# PROPERTY RIGHTS

- Texas: Case law indicates that surface owners have a stronger argument for the right to authorize the pore space for storage. See *Emeny v. United States*, 412 F.2d 1319 (Ct. Cl. 1969).
- West Virginia: W.Va. Code § 22-11A-5(a)(6) requires applicant to have, or will have, all “necessary” surface or pore space use.
- Wyoming: Must possess all legal right including surface rights “necessary”; pore space unitization discussed later. Surface owner owns the pore space. WYO. STAT. ANN. § 34-1-152.

# STREAMLINED PROCEDURES FOR TAKING PROPERTY

Possible mechanisms to take rights related to pore space in addition to voluntary negotiation:

1. eminent domain,
2. unitization, or
3. public use.

# EMINENT DOMAIN

- Subsurface sequestration and surface facilities
- Legislative declaration of public interest:
  - Louisiana, Mississippi, North Dakota, West Virginia, and Oklahoma.
  - first step in the eminent domain process.
- Some states establish specific eminent domain and unitization authorizations for CCS projects:
  - Louisiana
  - Oklahoma
- West Virginia: CCS declared integral to power generation

# UNITIZATION

- Consolidating multiple properties into a single property for the purpose of carbon sequestration.
- May be the most efficient method of taking.
- Similar to the process used for oil production.
- Most effective economically and environmentally
- Authorized for CCS in several states:
  - Kentucky: must first negotiate 51% of pore space
  - Mississippi: must first negotiate majority of rights
  - Montana: must own 60% of surface interest
  - North Dakota: must first own 60% of pore space
  - Wyoming: must first have approval of 80% interests

# PUBLIC USE

- No precedent for “taking” of pore space; however, several important U.S. Supreme Court cases:
  - *Causby v. United States*, 328 U.S. at 258 (1946): flights over private land are generally not a taking.
  - *Penn Central Transportation Company v. City of New York*, 438 U.S. 104 (1978): listing on national registry was no taking since no transfer of control of the property.
  - *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 421 (1982): a minor but permanent physical occupation of an owner’s property was taking
  - *FPL Farming, Ltd. v. Texas NRCC* , (Tex.App., 2003) applied *Loretto* in concluding that operator to increase a maximum injection rate of the industrial waste to a saltwater formation beneath the surface was not taking



# PUBLIC USE

- Midwestern Governors Association : proposed 2,500 feet not associated with hydrocarbon development, accessible for public use.
- Carnegie Mellon CCSReg Project: enable UIC regulators to permit CCS projects and to allocate the use of subsurface pore space
- WV CCS Working Group Report to Legislature (2011): proposed 2500 feet not used for another purpose accessible for public use

# LONG TERM CARE

- Includes stewardship and liability.
- Federal government not yet provided for post-closure transfer of liability.
- Some state provide for closure plans and financial responsibility:
  - Alabama, Kansas, Mississippi Texas, Washington, West Virginia, Wyoming
- Some states transfer the stewardship and liability for completed CCS projects:
  - Illinois, Kentucky, Louisiana, Montana, North Dakota,

# CCS PIPELINES

- Illinois: eminent domain. 220 ILCS 75/20(e)
- Indiana: eminent domain. IC 8-1-8-1(a).
- Kentucky: eminent domain. KRSA §154.27.
- Louisiana: eminent domain LRSA§30:1108.
- Mississippi: eminent domain for EOR only.  
Mississippi Code § 11-17-47.
- Montana: eminent domain. MCA 69-13-104.

# CCS PIPELINES

- New Mexico: eminent domain. NMSA § 70-3-5.
- North Dakota: eminent domain. NDCC 54-17.7-04(1) to (18)
- Texas: eminent domain if common carrier. Tex. Nat. Res. Code Ann. § 111.019.
- West Virginia: eminent domain implicit. W.Va. Code § 22-11A-1(a)(13).
- Wyoming: eminent domain WYO. STAT. ANN. § 1-26-814.

# CONCLUSION

- Much controversy about whether CCS is demonstrated.
- Many states anticipate the need for CCS as part of the future for their fossil fuel
- Key issues being addressed by states include property rights and takings issues and the management of long term liability
- Expect continued state leadership on the future of CCS

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