

## State Activity: Providing the Legal and Regulatory Foundation for CCS Success

Presented to: EOR Carbon Management Workshop  
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## State Activity: Providing the Legal and Regulatory Foundation for CCS Success

- Why States must be engaged
- Legal issues
- State Activity/State Trends
- Opportunities and Challenges
- What's Next

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## Reasons For State Involvement

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"...Given the ownership issue and proposed long-term 'care-taker' role of the states, the states are likely to be best positioned to provide the necessary 'cradle to grave' regulatory oversight of geologic storage of CO<sub>2</sub>"

*Storage of Carbon Dioxide in Geologic Structures: A Legal and Regulatory guide for States and Provinces, IOGCC  
September 2007*

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## Reasons for State Involvement

- States are currently principal regulators of EOR and natural gas storage
- Industry and states have 30+ years experience in the injection, transportation and processing of CO<sub>2</sub>
- States are laboratories of innovation
- Major legal issues fall within state jurisdiction

## Legal Issues

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## Legal Issues



## Legal Issues



- **Access and subsurface property rights** – balancing various interests, injected CO<sub>2</sub> & acquisition of property rights
- **Long-term stewardship and liability** – existing analogs; public perception; liability
- **Classification of CO<sub>2</sub>** – waste/pollutant vs. benefit/industrial product
- **Monitoring, measuring and verification** – balance data needs w/ economic considerations

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## Access and Subsurface Property Rights



- Analogs exist in oil and gas
  - Oil & gas
  - Hazardous waste disposal
  - Natural gas storage
- Subsurface ownership
- Ownership of emplaced CO<sub>2</sub>

## Access and Subsurface Property Rights



- Acquisition of property rights
  - Eminent Domain
    - Natural gas analog (federal grant of eminent domain)
    - GS faces unique challenges
  - Unitization
    - Courts reluctant to interfere with resource production; avoid waste
  - UIC framework
- When applied
  - Eminent domain for gas storage
  - Unitization for CO<sub>2</sub> flooding
- Benefit: Reduced liability

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## Long -Term Stewardship and Liability



- Operational Liability
  - Environmental, health & safety risks associated with carbon capture, export and injection
  - Existing analogs
  - Causes of action; negligence, strict liability, trespass product liability
  - Risk can be handled under contracts; however time frame should be standardized

## Long -Term Stewardship and Liability



- Types of Long-Term Risks
  - Environmental
  - In Situ
  - Transnational
- Addressing Liability
  - Federal, state, industry, company
  - Many existing analogs
    - Nuclear
    - Superfund
    - IOGCC Proposal
- Waste v. Resources is important here
  - Natural gas storage - limited liability
  - Superfund type liability

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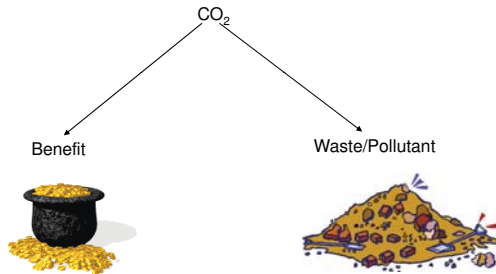
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## Classification

- Crossroads



- Flexibility

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## Classification

- Crossroads

- Beneficial Use

Beneficial Uses of CO<sub>2</sub>

1	Refrigeration	Used for cooling
2	Fire Extinguishers	Extinguishes some fires by depriving the fire of oxygen
3	Carbonated beverages	Produces carbonation
4	Decaffeinated Coffee	Used in super cooled fluid extraction process
5	Dry ice	Used to make stage fog and other visual effects
6	Feedstock	Can be used as feedstock for chemical manufacturing
7	Biofuels	Aids in the process of algae growth to make biofuels
8	Enhanced Oil Recovery	Aids in recovery of oil from depleted oil and gas reservoirs – huge volumes utilized

- Waste Pollutant

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## Classification

- Regulatory implications
  - Resource management framework
  - Waste disposal framework
- Liability implications
- Economic Implications

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## Monitoring, Measurement and Verification

- MMV Questions
  - Who monitors?
  - For how long?
- Related to Liability
- CCS demonstration projects will provide basis for regulation
- Guidelines v. Prescription
  - Texas example – case by case

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## State Activity

## State Activity

- Feds vs. States

Federal Gov't	States
• 2001 Voluntary Policy	• California
• Energy Policy and Conservation Act of 2005	• North Dakota
• Lieberman/Warner and other Legislation	• Kansas
	• Texas
	• Wyoming
	• New Mexico
	• RGGI
	• WCI
	• Etc.

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## State Activity



### • New Mexico

Interim Report on Identified Statutory and Regulatory Issues: Carbon Dioxide Sequestration, New Mexico Energy, Minerals, Natural Resources Department, Oil Conservation Division dated June 27, 2007\*

\* Ref : <http://www.emnrd.state.nm.us/OCD/documents/InterimReportCO2Sequestration.pdf>  
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## State Activity



### • New Mexico

- Identifies the issues and challenges to be addressed by **potential statutory and regulatory changes**, questions, concerns and recommendations of the stakeholder group, and to present preliminary findings and research to date for further policy development
- **2007 Advanced Energy Tax Credit Bill** – tax credit for carbon capture technology

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## State Activity



### • Wyoming

- Two carbon sequestration bills under consideration
  - Ownership of Subsurface Voids
  - Carbon Capture and Sequestration

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## State Activity



### • Wyoming

#### – Wyoming Pipeline Authority



- Realized Success with Two Natural Gas Pipeline Projects (Kern River PL (loop) and Rockies Express)
- Expanded to Include CO<sub>2</sub> Pipelines

#### – Wyoming Infrastructure Authority

- Recently Announced Coal Gasification Partnership with PacifiCorp involving CCS
- WIA provided with \$1 billion in bonding authority



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## State Activity



### • California

- AB 705 – CO<sub>2</sub> Storage Bill
  - Impacted by Public Concerns
  - Setback for CCS



"There is overwhelming scientific evidence and knowledge that catastrophic leakage from a geologic sequestration site is extremely unlikely..."

Letter to the Honorable Loni Hancock  
California Assembly, from Dr. Susan Hovorka,  
Gulf Coast Carbon Center, et al.

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## State Activity



### • California

- September 2007 – Geologic Carbon Sequestration Strategies for California
  - Comprehensive
  - Special attention to CO<sub>2</sub> for EOR
  - Outlines the legal and regulatory issues

"...while technical challenges remain to CO<sub>2</sub> sequestration, the primary barriers to advancing GS projects lie within the statutory and regulatory arena."

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## State Activity



### • Kansas

- Passed law requiring the development of rules for GS by July 2008



### • North Dakota

- Posted proposed rules (based on IOGCC Guidelines) for GS



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## State Activity



### • Pennsylvania

- Department of Conservation and Natural Resources (DCNR) to develop a Carbon Management Plan
- DCNR's Carbon Management Plan will address CCS by
  - Developing best practices and assessment tools to evaluate geologic sequestration and CO<sub>2</sub> for coal-bed methane recovery
  - Inventory of GS sites and coal-bed methane recovery sites
  - Provide background details for policies for GS siting



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## State Activity



### • Texas

- **Advanced Clean Energy Bill (HB 3732)** – Implements the first State Certification Program CCS for EOR
  - Recognizes CCS (including EOR) as a “Qualifier” for Clean Energy
  - Provides severance tax reduction for Industrial CO<sub>2</sub> for EOR
  - Provides Ad Valorem Tax Abatement for CO<sub>2</sub> Capture
- **HB 1967 – CO<sub>2</sub> Pipelines**



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## State Activity



- CCS Not Yet Adopted as an “Offset”
- Maine legislation makes provisions for CCS
- Hope that other states will follow

### Western Climate Initiative

- Governors of **Arizona, California, New Mexico, Oregon, Utah & Washington**
- CCS not yet addressed

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## State Trends



	AGENCY		EMINENT DOMAIN/ UNITIZATION	SUBSURFACE OWNERSHIP		LONG-TERM STEWARDSHIP & LIABILITY
	O&G	ENV		Surface Estate	Mineral Estate	
NM	<input checked="" type="checkbox"/>		YES	<input checked="" type="checkbox"/>		DISCUSSED
WY	<input checked="" type="checkbox"/>		PARTIAL*	<input checked="" type="checkbox"/>		NA
CA	DISCUSSED		DISCUSSED	DISCUSSED		DISCUSSED
ND	UNDECIDED		YES	NA		Transfer to State
TX	TBD 2009		NA	NA		Futurgen <sup>1</sup>

\*Allowed for surface right of way, but not for subsurface pore space  
NA = Not addressed  
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1. Texas assumes ownership of CO<sub>2</sub>

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## Challenges and Opportunities



- Industrial product/Commodity vs. waste/pollutant
- Subsurface Ownership
- Liability Issues Unresolved
- Need for Regulatory Frameworks (State-by-State)
- Public Perception and Acceptance
- CO<sub>2</sub> Demand and Market development without Required Reductions
- Need for Large-scale commercial demonstration projects

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## Next Steps



- Educate, Influence & Inform
- Mobilize citizens and policymakers
- Unified Voice
- Policy Development Forums
  - North American Carbon Capture & Storage Association
  - Texas Carbon Capture & Storage Association

## Questions?



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