Carbon Capture and Sequestration: The Evolving Regulatory Framework In New York State

Environmental Monitoring, Evaluation, and Protection Conference
NYSERDA

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Presentation Outline

- Project Background
- Overview of Report Content
  - CCS Goals and Regulatory Challenges
  - Federal Regulatory Procedures
  - Lessons from other States
  - Common Law Precedents
  - Regulatory Framework in New York
  - Policy Issues in New York
- CCS Project Status in New York
CCS Feasibility Study
NYSERDA Project No. 10498

- Task 1: Carbon Sequestration Permit Strategy—Selection of Preferred Site
- Task 2: Selection of Sequestration Strategy
- Task 3: Evaluation of Costs and Potential Benefits
- Task 4: Assessment of Regulatory and Permitting Issues
- Task 5: Insurance and Indemnification Issues
CCS Feasibility Study
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- Task 1: Carbon Sequestration Permit Strategy—Selection of Preferred Site
- Task 2: Selection of Sequestration Strategy
- “White Paper on CCS”
  - Task 3: Evaluation of Costs and Potential Benefits
  - Task 4: Assessment of Regulatory and Permitting Issues
  - Task 5: Insurance and Indemnification Issues
1. Introduction
2. Developing CCS and Common Law Precedents
3. Regulatory Framework for CCS in NY State
4. Policy Issues Affecting CCS Implementation in NY State
5. Conclusions
Highlights: The Devil’s in the Details

- Federal Permitting: UIC Class VI proposed
- Detail: Trace contaminants in the CO2 stream could trigger RCRA or CERCLA, or the Supreme Court definition of CO2 as a “pollutant” could trigger CERCLA liability.
However, these laws are either:

- Project specific;
- Don’t address liability;
- Fail to consider pore space ownership (except WY)

IOGCC Guidelines are more complete but have not been adopted anywhere.
Highlights: The Devil’s in the Details

- Common Law Precedents
  - American Rule
  - Trespass
  - Nuisance Claim
  - Abnormally Dangerous Activity
  - Negligence
  - The Negative Rule of Capture
  - The English Rule
  - Etc.
Highlights: The Devil’s in the Details

- Existing Laws and Regulations
  - National Environmental Policy Act
  - State Environmental Quality Review Act
  - Air Permit (19 ECL)
  - Regional Greenhouse Gas Initiative
  - Federal Clean Air Act
Highlights: The Devil’s in the Details

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Air Permit (19 ECL)

- NYS DRAFT CO2 Regulations

<table>
<thead>
<tr>
<th>Source</th>
<th>NY CO2 Limit</th>
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<tbody>
<tr>
<td>Electric Generating Units (boiler, turbines, IGCC)</td>
<td>925 lb/MWh</td>
</tr>
<tr>
<td>Simple Cycle Turbines (&lt;100 MW)</td>
<td>1450 lb/MWh</td>
</tr>
<tr>
<td>Very Large Boilers</td>
<td>125 lb/MMBTU</td>
</tr>
<tr>
<td>Gasification</td>
<td>125 lb/MMBTU</td>
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For Comparison, California Chapter 11/SB1368 limit is 1100 lbCO2/MWh for local publicly owned electric utility procuring electricity
Highlights: The Devil’s in the Details

- Existing Laws and Regulations that Require Modification to Apply to CO2
  - Oil, Gas, and Solution Mining Law (23 ECL)
  - Public Service Law
  - Federal Energy Regulatory Commission
Key Policy Recommendations

- Develop a comprehensive CCS program consistent with existing regulations.
- Develop ownership regulations that clarify pore space ownership, vesting ownership with surface owner unless mineral rights have been severed.
- Create regulations that parallel regulations from the waste disposal, oil and gas industries.
- Build on existing Oil and Gas Law to authorization unitization of reservoirs, fair compensation, review, etc.
- Create incentives, particularly for “early movers.”
Questions?

Stratigraphic Test Well, NY
Ecology and Environment, Inc.

CO2 Injection Well, MI
Courtesy Battelle