

Chapter 1

Carbon Capture and Storage: Promising Technology, But Many Legal Questions Remain

Bill Jeffery

*Associate Professor of Law
Texas Tech University School of Law
Lubbock, Texas*

Synopsis

| | | |
|---------|--|-----------|
| § 1.01. | Introduction..... | 4 |
| § 1.02. | Climate Change and Greenhouse Gas Emissions..... | 4 |
| | [1] — The Shifting Debate About Global Warming and Climate Change | 5 |
| | [2] — The Role of Greenhouse Gases. | 5 |
| | [3] — Control of Carbon Dioxide Emissions | 6 |
| § 1.03. | Sources of CO₂ Emissions..... | 9 |
| § 1.04. | Carbon Capture and Storage (CCS)..... | 10 |
| § 1.05. | Legal Questions Presented by CCS..... | 12 |
| | [1] — Who Controls Rights to Surface Use for CCS Projects? | 13 |
| | [2] — Who Owns the Geologic Storage Space that Will Be Used by CCS Projects?..... | 14 |
| | [a] — Non-Federal Lands | 15 |
| | [b] — Federal Lands | 20 |
| | [3] — Who Regulates CCS Projects? | 24 |
| | [4] — What Regulatory Requirements Apply to CCS Projects?..... | 27 |
| | [5] — Who Will Be Liable for Problems that May Occur During CCS Operations?..... | 30 |
| | [6] — Who Will Be Liable for Problems Occurring After the Injection Phase of a CSS Project? | 34 |
| § 1.06. | Conclusion..... | 34 |

§ 1.01. Introduction.

When I first heard several years ago that someone was proposing to capture carbon dioxide (CO₂) from coal-fired power plants and to store the CO₂ in the ground for hundreds of years, I rolled my eyes and thought it was another “crackpot” idea to deal with concerns about global warming and climate change. I was wrong.

Today, this strategy of carbon capture and storage (CCS) is gaining traction as a serious climate change mitigation strategy, supported by hundreds of millions of federal research dollars¹ and significant private investment. Proponents of additional research into issues raised by large-scale deployment of CCS include federal and state elected officials, governmental agencies, private sector companies and trade associations, environmental groups, and others in the United States and around the world. They describe CCS as a mitigation strategy that is technologically feasible and capable of achieving significant reductions in greenhouse gas emissions believed to contribute to global warming.²

This chapter briefly describes what is meant by CCS and how it could be used to address climate change concerns, and then discusses several legal and regulatory questions that may become major impediments to large-scale deployment of CCS because we lack adequate answers to those questions.

§ 1.02. Climate Change and Control of Greenhouse Gas Emissions.

The scientific hypothesis that burning of fossil fuels increases global temperatures traces its roots to the 19th century, but it was not until the latter part of the 20th century that concerns about global warming, and related concerns about climate change, became significant concerns of public policy.

¹ See generally U.S. Dep’t of Energy, Office of Fossil Fuel, Carbon Sequestration: Key R & D Programs and Initiatives, <http://www.fossil.energy.gov/programs/sequestration/index.html> (last visited Sept. 26, 2008)(listing of current research programs).

² See generally U.S. Dep’t of Energy, Office of Fossil Fuel, Carbon Sequestration: Regional Partnerships, <http://www.fossil.energy.gov/programs/sequestration/partnerships/index.html> (last visited Sept. 26, 2008)(describing regional partnerships and their goals).