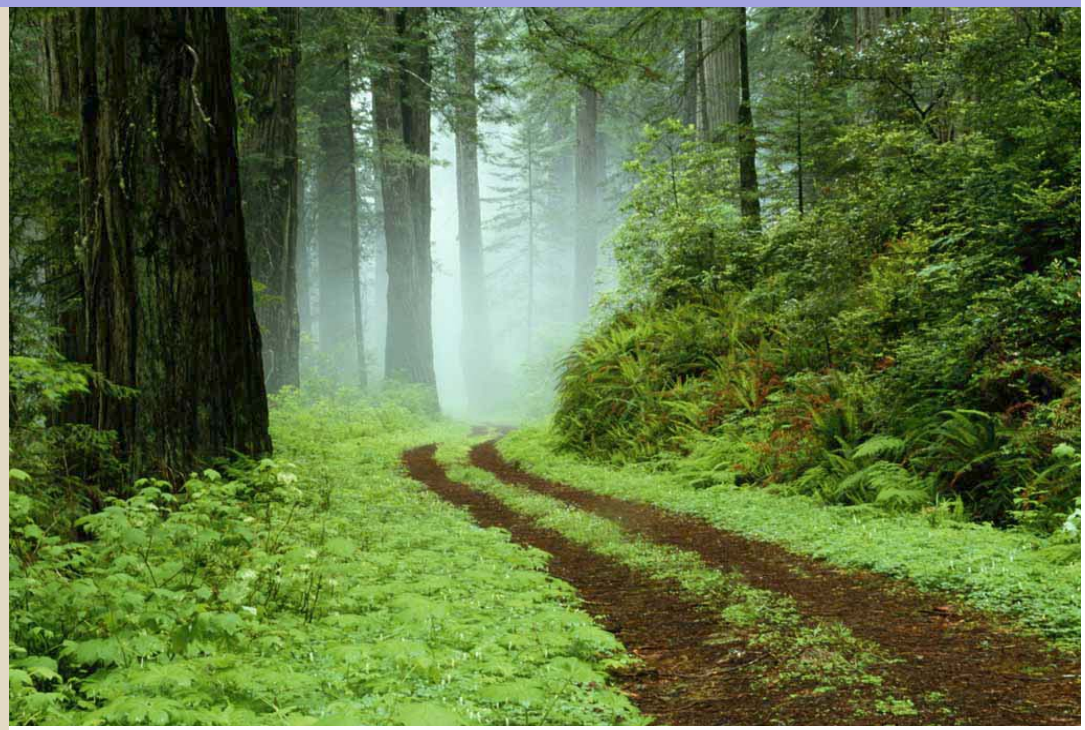
U.S. Carbon Sequestration Council

CSLF Policy Group Meeting
San Francisco, CA



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June 29, 2009

The Problem

- Events in Washington, D.C. are moving fast relative to carbon dioxide capture and storage (CCS) issues and climate change mitigation in general.

- Decision makers are typically either uninformed or misinformed on important aspects of carbon capture and storage.

The Solution

- To be effective in assuring well informed decision making, stakeholders must have quick and knowledgeable response capability.
  - They must be able to present CCS and related information in a form that can be understood by the decision makers.
  - They must speak with one consistent, authoritative, and objective national voice.
    - In short: They must be organized.

The Organization

- The United States Carbon Sequestration Council (USCSC) has been established to provide this much needed national voice to inform and educate on all matters related to CCS and; thereby, promote constructive domestic and global solutions.

  - **Objective:** To *inform* and to *educate* on all matters pertaining to CCS to help assure well informed and objective decision making by domestic and global institutions in the face of fast moving events.

AUTHORITATIVE

OBJECTIVE

EDUCATIONAL

UNBIASED

NON-PARTISAN

Who is the USCSC?

The U.S. Carbon Sequestration Council (USCSC) is a non-profit coalition of scientists, engineers, academics, environmentalists, and leaders from the business and the public sectors. These individuals from 40 U.S. States and 4 Canadian Provinces, have pledged their time, their money, and their ingenuity to develop something of lasting value to our society: a source of low cost and pollution-free energy. One of the unique aspects of the USCSC is its broad network of nationally and internationally renowned experts, provided by its non-profit members.

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Functions

- Provide USCSC members with a **unified voice** on carbon sequestration issues.
- Offer **sound technical information** to policy makers at the national, regional, and state levels.
- Develop and disseminate national **outreach and educational** material in a variety of formats.
- Promote **capacity building and training**.

Capacity Building and Training

- CSLF
- National and State Level Training Initiatives
- Research Experience in Carbon Sequestration (RECS) Program
- Educational Papers

Research Experience in Carbon Sequestration (RECS)

- Founded by EnTech Strategies, LLC in 2004, RECS fosters and advances education, scientific research, professional training and career networks in the field of CCS systems.

- RECS is a first-of-its-kind-program with an alumni network of over 150 young scientists and engineers and a faculty comprised of leading experts from throughout the U.S.

Educational Papers

- CCS 101
- Is Carbon Capture & Storage (CCS) Needed?
- Is CO_2 Sequestration Safe?
- Wanted: A Legal & Regulatory Framework for Carbon Capture & Storage (CCS)
- Heterogeneity & Complexity of the National Geologic Resource for Sequestration

CCS 101

- Discusses the need for CCS and the fundamentals of CCS.
- Organized in two parts, Part I focuses on issues such as the Greenhouse Effect and greenhouse gases.
- Part II explains the process of CCS (CO_2 capture, transport and storage) as well as the challenges of overcoming barriers to CCS deployment (cost, storage validation, regulatory uncertainty and risk and liability

Is CCS Needed?

- CCS is an emerging technology that is essential to the achievement of most long range GHG reduction goals.
- Current CCS technologies use a combination of known and emerging technologies and processes.
- Much work remains, such as
  - Adopt near-term financial incentives for “first generation” CCS systems
  - Continue RD&D
  - Establish rules for CCS adoption
  - Provide for long-term liabilities

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Is CO_2 Sequestration Safe?

- Addresses the question of whether it is safe to store carbon dioxide in deep underground geological structures.
- The IPCC (32 noted authors) concluded that CO_2 can be safely sequestered in geologic formations; that CO_2 sequestration is as safe as activities that have been ongoing for decades, such as EOR, natural gas storage, and deep underground disposal of acid gas (IPCC, 2006).
- The successful sequestration of CO_2 will require proper site selection using accurate subsurface information, an effective monitoring and verification program, and a reasonable legal and regulatory framework.

Legal & Regulatory Framework for CCS

- Discusses the need for a reasonable legal and regulatory framework to enable broad deployment of CCS, especially for early adopters.

- A legal and regulatory framework currently does exist, and can be built upon, for enhanced oil recovery (EOR) employing underground CO_2 injection into depleted oil fields.

- In order for a commercial CCS project to be successful, it must have both commercially viable CCS technology and a legal and regulatory framework that provides sufficient certainty on matters relating to transport, storage, monitoring, and especially regarding long -term liability.

Heterogeneity & Complexity of the National Geologic Resource for Sequestration

- Intends to illustrate the extensive data necessary to adequately understand the national geologic storage resource.
- If a large-scale field test were to be pursued for each possible permutation, the resulting research program would not be economically practical.
- Nevertheless, there needs to be a sufficient number of field tests to permit (1) extrapolation to the full national resource with confidence and (2) understanding of the scaling issues as CO_2 is injected on an increasing scale.

Contact Information

U.S. Carbon Sequestration Council

434 Spring Street Ext.

Mars, PA 16046

Email: info@uscsc.org

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www.uscsc.org