

Carbon Capture and Sequestration Energy Hub Workshop Monday July 6th 2009

Introduction

9:00 AM *Welcome* – Berend Smit (LBNL/UCB)

9:10 AM *The Challenges for CCS* – Sally Benson (Stanford)

Physical Capture and Sequestration

9:40 AM *Introduction to Energy Frontiers Research Centers at LBNL and UCB*

- Jeff Long (LBNL/UCB) – *Carbon Capture EFRC*
- Don DePaolo (LBNL/UCB) – *Carbon Storage EFRC*

10:00 AM *Brainstorming framed by Short Presentations* (Refreshments Served)

Two-Slide Presentations

- Jonathan Ajo-Franklin (LBNL)
- Lou Durlinsky (Stanford) – *Simulation and Optimization of Sequestration*
- Steven Kaye (Wildcat Discovery Technologies) – *High Throughput Gas Separation and Storage Tools*
- Curt Oldenburg (LBNL) – *Beneficial Uses of CO₂*
- Lynn Orr (Stanford) – *Research Issues for Enhanced Oil Recovery and Coal Bed and Basalt Storage*
- Mark Zoback (Stanford) – *A Strategy for Enhanced Recovery and CO₂ Sequestration in Gas Shales*

11:00 AM *Discussion*

The Broader Context of Carbon Capture and Sequestration

11:30 AM *The Scale of the Problem*

- Abhoyjit Bhowan (Electric Power Research Institute)

12:00 PM *Brainstorming framed by Short Presentations* (Lunch Served at 12:30)

Two-Slide Presentations

- Ron Cohen (UCB)
- Karl Gerdes (Chevron) – *Industrial Perspective on Cost, Energetics, and Scale*
- Isha Ray (UCB) – *Incorporating Public Perceptions of CCS in Energy Policy*
- Alan Sanstad (LBNL) – *Improving Modeling of Economy, Climate, and Energy Policy to Define Research Targets*

Chemical Capture and Sequestration

1:30 PM *Overview of Chemical CCS, Stripping, and Utilization*

- Clifford Kubiak (UCSD)

2:00 PM *Brainstorming framed by Short Presentations* (Refreshments Served at 3:00)

Two-Slide Presentations

- Caroline Ajo-Franklin (LBNL)
- John Arnold (UCB) – *Clean oxidation process and chemical feedstocks*
- Chris Edwards (Stanford) – *Coal combustion with zero emissions*
- Jon Ellman (LBNL/UCB)
- Heinz Frei (LBNL) – *Conversion to fuel via sunlight*
- Zahid Hussain (LBNL) – *What the Advanced Light Source Can Offer for CCS*
- Jeff Long (LBNL/UCB) – *Catalytic Reduction for CO₂*

Biologically-Inspired Carbon Capture and Sequestration

3:30 PM *Overview of Biological CCS*

- Jan Liphardt (LBNL/UCB)

4:00 PM *Brainstorming framed by Short Presentations*

Two-Slide Presentations

- Terry Hazen (LBNL)
- Christer Jansson (LBNL) – *Microalgae and Brine for Fuel Production*
- Janet Jansson (LBNL) – *LBNL Efforts on Biosequestration*
- Cheryl Kerfeld (LBNL/JGI)
- John Tainer (LBNL) – *Algal Biosequestration*

Conclusion

4:50 PM *Remarks* – Berend Smit (LBNL/UCB)