

Carbon Capture & Sequestration: The Business Summit

Washington, DC—July 14-15, 2010

Wednesday, July 14, 2010

8:00 – 9:00 *Networking Breakfast and Registration*

9:00 – 9:15 **Welcoming Comments by Summit Chair**
Kevin C. O'Brien, *CEO, President*, ENERGY COMMERCIALIZATION, LLC

9:15-10:00 **Steps Toward Forming a National Strategy for Successful Commercialization of CCS Projects – Setting the Stage for the Next Round of Projects**
Congress is working on comprehensive energy legislation that might include funding for CCS as part of a response to climate change, and the Obama administration recently announced a multi-agency task force with the express purpose of creating a national strategy for the commercialization of carbon capture and storage, with a goal of constructing 5-10 additional commercial projects by the 2016 time frame. What are the prospects for passage of legislation that supports the commercialization of clean coal technologies and carbon capture and storage projects?

Co-Presenters:

Tom Dower, *Senior Climate Advisor to Chairman Rockefeller*, SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

Allyson Anderson, *Professional Staff Member*,
US SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

10:00-10:15 **Update on Midwest CO2 Pipeline Business Study and the Potential for Development**
➤ Study by Denbury Resources on CO2 pipeline development in the Midwest
➤ A near-term sequestration solution for the Midwest
➤ Jumpstart to a CCS regime?
➤ Federal government funding not a requirement

Sherry Tucker, *Consultant*, DENBURY RESOURCES

10:15-10:35 *Networking Break*

10:35-11:35 **From Grappling with Threshold Legal and Regulatory Issues to Incentives for CCS Commercialization**

Beyond Federal funding, many states are grappling with the legal and financial issues with commercializing CCS. Some are even providing grants, guarantees and other incentives for projects working toward commercializing carbon capture and storage technologies, and will also play a key role in the siting and permitting process for both CO₂ pipelines and sequestration. This panel will discuss forward-looking states' efforts to confront a carbon-constrained future.

Moderator:

Surendra Saxena, *Professor of Mechanical and Materials Engineering*,
FLORIDA INTERNATIONAL UNIVERSITY

Panelists:

Ginny Brannon, *Climate Change Program*,

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Bill Hoback, *Director, Office of Coal Development*, STATE OF ILLINOIS

Klaus Lambeck, *Chief, Facilities, Siting & Environmental Analysis Division*,
Department of Energy & Environment,

PUBLIC UTILITIES COMMISSION OF OHIO / OHIO POWER SITING BOARD

11:35-1:00 *Group Luncheon*

1:00 – 2:00 **Emitters' Perspectives on Carbon Capture Implementation and Storage Business Models**

- »» What will drive the commercialization of CCS in the face of uncertainty?
- »» What are the largest challenges in moving deals forward?
- »» How much is being budgeted for carbon capture and sequestration?
- »» Do they think that project costs will be included in the rate base?
- »» What types of relationships are emitters seeking to establish with third parties?

Presenters:

Scott Fisher, *Director, Policy Coordination and Management*, NRG ENERGY

Gary Spitznogle, *Mgr IGCC & Gas Plt Engrg*, AMERICAN ELECTRIC POWER

2:00-2:40 **Standing and Preliminary Results of CCS Commercial Demonstration Project**

This presentation will review one of the major ongoing projects working to commercialize carbon capture and storage.

Texas Clean Energy Project:

Eric Redman, *President*, SUMMIT POWER GROUP

2:40-3:00 *Networking Break*

3:00-3:40

Transporter Perspectives on Effectively Siting and Strategically Financing CO₂ Pipeline Projects

- »» What kinds of deals and incentives might be needed to start constructing CO₂ pipelines?
- »» What strategies will they pursue to get pipelines permitted, financed and built?
- »» What types of project costs are they anticipating?
- »» What role do midstream companies plan to play in the carbon sequestration market?
- »» Are partnerships with third parties being sought?
- »» What types of agreements are they looking to make with emitters and CO₂ providers?
- »» What drivers determine which type of deals they are willing to make?
- »» What factors will most influence their level of transactions in the coming year?

Presenter:

Peter Keeshan, *Manager New Ventures*, ENBRIDGE INC.

3:40-4:40

Lenders' Perspectives on Financing Carbon Capture, Transport & Sequestration Projects

- »» Where is the current market in debt terms (e.g., rate, tenor, coverage, ratios, and covenants)?
- »» What types of leverage is available?
- »» What roles do you see playing in the DOE FIP Loan Guarantee Program?
- »» What is the role of working capital?
- »» What should developers better understand before they speak with you?

Moderator:

Norm Shilling, *Carbon Technology Leader*, GE ENERGY

Panelists:

Gerd Goette, *Vice President and Investment Partner*, SIEMENS

N. Clay Jones, P.E., *Managing Director, Project and Energy Finance*,

SOCIETE GENERALE CORPORATE & INVESTMENT BANKING

Michael Degernes, *Portfolio Manager*, ABERDEEN ASSET MANAGEMENT

4:40 – 5:00

Chairman's Closing Remarks

Kevin C. O'Brien, *CEO, President*, ENERGY COMMERCIALIZATION, LLC

Thursday, July 15, 2010

8:00 – 9:00 *Networking Breakfast*

9:00 - 9:45 **From EOR to CCS — Developing Legal and Regulatory Framework**
»» CCS in the global market—will CCS get recognized as offset in the aftermath of Copenhagen?
»» What progress is being made on the federal level regarding regulation of carbon capture?
»» Recent legislation at the state level regarding poor space ownership—what has happened to date, and how might that affect the national picture?
»» What impacts will EPA rulings, regarding classification of CO₂, have on the sequestration market?

Panelists:

Jerry R. Fish, *Partner*, STOEL RIVES LLP

David Hunter Ph.D., *US Director*, INTERNATIONAL EMISSIONS TRADING ASSOCIATION (IETA)

Robert Van Voorhees, *Of Counsel*, BRYAN CAVE LLP

9:45-10:05 *Networking Break*

10:05-11:00 **Economic and Technological Risk Management of Geologic Formation Storage**
»» Where do we stand now with geologic storage methodologies and technologies?
»» What are the advantages and disadvantages of geologic storage?
»» What costs are expected with geologic storage operations?
»» What types of incentives will be needed to further geologic storage?
»» Who is likely going to bear the costs associated with technology risk?
»» What is seen as short- or long-term risk?
»» What relationships are being sought to minimize technology risk?
»» What should developers know before choosing a technology?

Panelists:

Philip Jagucki, *Project Manager*, SCHLUMBERGER CARBON SERVICES

Vello A. Kuuskraa, *President*, ADVANCED RESOURCES INTERNATIONAL, INC.

Charles D. McConnell, *Vice President Carbon Management*,
BATTELLE ENERGY TECHNOLOGY

11:00-11:45 **EOR and Carbon Storage - Deal Economics and Structures**

»» What drivers will determine moving forward with the development of gathering systems?

»» What are the largest challenges they see in moving deals forward?

»» How much carbon will be needed for EOR?

»» Do they think gathering system costs will be borne directly by plant operators, or will it be necessary to socialize these costs?

Moderator:

Kevin C. O'Brien, *CEO, President*, ENERGY COMMERCIALIZATION, LLC

Panelists:

John D. Allison Jr., *Engineering Manager*, LEGADO RESOURCES

Phillip Dipietro, *Director, Situational Analysis and Benefits Division, Office of Systems, Analyses and Planning*, US DEPARTMENT OF ENERGY / NATIONAL ENERGY TECHNOLOGY LABORATORY

Stephen Melzer, *Owner*, MELZER CONSULTING

Peter J. Taglia P.G., *Staff Scientist*, CLEAN WISCONSIN

11:45 – 12:00 **Closing Remarks & Summit Adjourns**

Kevin C. O'Brien, *CEO, President*, ENERGY COMMERCIALIZATION, LLC