

Outline of Workshop Program and IEA-CSLF Activities for the G8

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Director, CSLF Secretariat

G8-IEA-CSLF Workshop on Near-Term Opportunities
for Carbon Capture and Storage (CCS)
San Francisco, California
August 22, 2006



Request from the G8: Gleneagles Plan of Action, July 2005

We will work to accelerate the development and commercialization of Carbon Capture and Storage technology by:

...inviting the IEA to work with the CSLF to hold a workshop on short-term opportunities for CCS in the fossil fuel sector, including from Enhanced Oil Recovery and natural gas production.

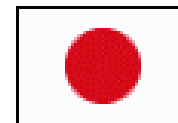


About the G8

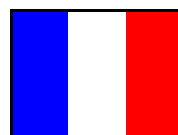
- The G8 (“Group of 8”) is an unofficial forum of the heads of the leading industrialized democracies.
- Members account for 51% of industrial output and 49% of global exports.
- G8 presidency and summit venues rotate
 - 2005: United Kingdom
 - 2006: Russia
 - 2007: Germany
 - 2008: Japan
- The G8 was designed to harmonize attitudes to acute international problems.
- Climate change was a focus of the 2005 summit in Gleneagles, Scotland.



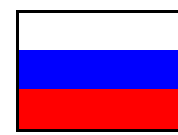
Canada



Japan



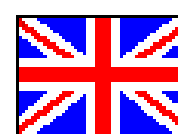
France



Russia



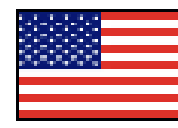
Germany



United Kingdom



Italy



United States



The International Energy Agency (IEA)

- The IEA is an autonomous agency linked with the Organization for Economic Cooperation and Development (OECD).
- IEA Objectives:
 - Maintain and improve systems for coping with oil supply disruptions;
 - Promote rational energy policies in a global context;
 - Operate permanent information system on international oil market;
 - Improve the world's energy supply and demand structure;
 - Assist in the integration of environmental and energy policies.
- The IEA has 26 Member Countries.

www.iea.org



IEA Working Party on Fossil Fuels

- Advises IEA on fossil fuel technology-related trends, projects and programs
- Advises IEA on strategies that address priority environmental protection and energy security interests
- Executes activities to meet members' needs through international co-operation and collaboration
- Oversight on Implementing Agreements such as the IEA Greenhouse Gas R&D Programme



Carbon Sequestration Leadership Forum (CSLF)

- An international climate change initiative with a focus on new technology development for separation, capture, transport, and long-term storage of CO₂
- Objectives:
 - Make new technologies broadly available internationally
 - Identify and address wider issues relating to carbon capture and storage
- Members include 21 countries and the European Commission

www.cslforum.org



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What are near-term opportunities for CCS?

Opportunities that are technically and economically viable or ready for demonstration or commercialization in the near term and include both sources and sinks and all fossil fuels.

Examples may include:

- High concentration sources,
- Hydrogen production,
- Enhanced oil recovery,
- Gas production,
- “Capture ready” power plants and other facilities, and
- Early demonstrations.



Potential Challenges to Deployment

- Further technology development may be needed.
- Economic and financial infrastructure may not yet be in place.
- The legal and regulatory foundation may be incomplete.
- Public may be inadequately informed to ensure acceptance.
- Viable mechanisms for international projects may be lacking.



Concept for the Workshop Series

- Objective: Help achieve the G8 goal of accelerating the development and commercialization of CCS by providing recommendations to facilitate near-term opportunities.
- Three workshops are anticipated:
 1. Issues/Opportunities Workshop (San Francisco, August 2006)
 2. Assessment Workshop (Norway, early 2007)
 3. Recommendations Workshop (Canada, later in 2007)
- Final report to the G8 at its 2008 summit will make specific policy recommendations.



Goal for this Workshop

- Define the issues and opportunities by addressing questions such as:
 - What is the potential for near-term opportunities?
 - What are their niches, status and outlooks?
 - How can near-term opportunities facilitate widespread CCS?
 - What are the commercialization lessons from current projects?
 - What are the issues and concerns of stakeholders?
 - What barriers must be overcome?
 - What types of policies are needed for implementation?
- Deliverable: Discussion paper based on the findings to be input to next workshop.



Who are the experts?

**Technology
Firms**



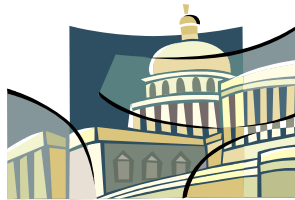
**Energy
Companies**



**Financial
Institutions**



Government



**Environmental
NGOs**



**Academic
Institutions**



Workshop Agenda

Tuesday, August 22

Start 8:00	
Plenary Early Markets for CCS: Setting the Scene	
<small>Coffee Break</small>	
11:35	Breakout Sessions Scene Setting and Issue Framing
12:10	Lunch
13:00	Breakout Sessions Issue Raising and Prioritization
<small>Coffee Break</small>	
15:10	Plenary •Panel 1: Emerging Economies •Panel2: Developed Economies

Adjourn 17:30

18:00	Welcome Reception
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Wednesday, August 23

Start 8:50	
Breakout Sessions Discussion of Issues Raised	
<small>Coffee Break</small>	
10:45	Breakout Sessions Bridging to the Next Workshop
12:15	Lunch/Speaker
14:00	Plenary Reports from Breakout Chairs
<small>Coffee Break</small>	
15:30	Plenary Conclusions, Key Issues and Tasks for Following Workshops

Adjourn 17:15



Breakout sessions address each type of challenge.

1. Technical
2. Economic-Financial
3. Legal-Regulatory
4. Public Awareness
5. International Mechanisms



Breakout Group Tasks

- Identify near-term opportunities relevant to the Group's area;
- Identify perceived issues/barriers to commercialization;
- Describe how the issues affect the opportunities;
- Indicate cross-cutting issues for other Breakout Groups;
- Define gaps in international cooperative activities; and
- Indicate needs for the second workshop.





Early Markets for CCS: Setting the Scene

Keynote Speech, John Ryan

Oil and Gas Industry Perspective, Rhonda Zygocki

European Perspective, Evangelos Tzimas

CSLF Technical Group Perspective, Bill Reynen

IEA Executive Perspective, Neil Hirst

Coffee Break

CSLF Policy Group Perspective, Sergio Garribba

Environmental Perspective, Daniel Lashof

Overview of Near-Term CCS Projects and Prospects, Harry Audus

Coal and Power Perspectives, Mike Mudd

UN Commission on Sustainable Development Perspective,
Mohammed Jassim Al-Maslamani

Outlook for Early Markets: Opportunity and Challenges, Pamela Tomski

