



## **MEETING SUMMARY**

CSLF Projects Interaction and Review Team (PIRT)  
Washington, DC, USA  
16 November 2008

Prepared by the CSLF Secretariat

### **LIST OF ATTENDEES**

Australia:	John Bradshaw, Rick Causebrook, Aleksandra Kalinowski, Dennis Van Puyvelde
Canada:	Stefan Bachu
European Commission :	Petre Petrov
France:	Pierre LeThiez, Christian Fouillac, Bonijoly Didier
Germany :	Jürgen-Friedrich Hake
Iran:	Amir Mohammad Eslami
Japan:	Shingo Kazama
Norway:	Trygve Riis
South Africa:	Elizabeth Marabwa, Milingoni Robert Phupheli
United Kingdom:	Nick Otter (Chair), Rachel Crisp
United States:	Joseph Giove, George Guthrie
IEAGHG:	Tim Dixon
Freelance Journalist:	Victoria Schesinger
CSLF Secretariat:	John Panek, Richard Lynch, Scott Miles

### **MEETING SUMMARY**

#### **1. Welcoming Remarks and Introduction of Meeting Attendees**

PIRT Chairman Nick Otter of the United Kingdom called the meeting to order and welcomed the meeting attendees, who introduced themselves. CSLF Members represented at the meeting included Australia, Canada, the European Commission, France, Japan, South Africa, the United Kingdom, and the United States.

Mr. Otter went through a brief presentation of the PIRT's activities which include review the current portfolio of CSLF recognized projects, assess proposals for new projects, identify areas for additional projects, review and update the CSLF Technology Roadmap, encourage members to develop their own national CCS technology, and support the Technical Group by working with other bodies on complementary activities such as the International Energy Agency Greenhouse Gas Programme (IEA GHG) and the European Commission Seventh Research Framework Programme (EC FP7).

## **2. Progress on Joint Activities with IEA GHG R&D Programme and EC FP7**

Tim Dixon, representing the IEA GHG, briefed the PIRT on carbon capture and storage (CCS) activities being undertaken under the IEA GHG R&D Programme since the last PIRT meeting in April 2008.

Activities funded or which will be funded include advanced capture technologies, transport infrastructure, qualifications of deep saline aquifers, storage safety, public acceptance, gas turbines in integrated gasification combined cycle (IGCC) plants, oxyfuel combustion, fluidized bed combustion, a feasibility/engineering study for a CCS demonstration plant, support to regulatory activities for CCS, and efficiency increases in pulverized coal power plants. Any project seeking funding must submit a proposal three to four months before the next IEA GHG Executive Committee meeting. The project proposed by CSLF Technical Group/PIRT on Storage Capacity Coefficients is now underway (contracted to EERC in the United States), and will be completed perhaps in June 2009. It was agreed that the PIRT would provide reviewers for this project at the appropriate stage (France and Australia volunteered to respond). The project report, when complete, will be made available to CSLF Technical Group members.

Petre Petrov of the European Commission briefed the PIRT on carbon capture and storage (CCS) activities being undertaken under the EC FP7. More than €54 million have been spent or earmarked for CCS projects under the EC FP7. He agreed to forward the website link on EC FP7 proposals to the CSLF Secretariat.

Mr. Petrov also briefed the PIRT on the European Commission's European Strategic Energy Technology (SET) Plan. This plan would set the direction for Europe over the next decade for assuring an adequate supply of sustainable, secure, and competitive energy and includes CCS as a priority topic. The key elements of the plan are: joint strategic planning, increases in financial and human resources, reinforced international cooperation, and effective implementation through strong industry and stakeholder engagement. In the area of CCS there would be a continuing engagement with the European Technology Platform for Zero Emission Fossil Fuel Power Plants (ZEP).

## **3. Update of CSLF Technology Roadmap**

Nick Otter provided a summary of the PIRT's activities to update the CSLF Technology Roadmap. The updated Roadmap will be presented as a key deliverable at the CSLF Ministerial Meeting, currently scheduled for 16-18 November 2009. A robust draft needs to be finalized in time for the next CSLF Technical Group meeting. The Technology Roadmap will then be submitted to the Policy Group for review and endorsement.

The update is being undertaken with several important things in mind. The Roadmap will be aligned to the CSLF Strategic Plan, which is also under development. The Roadmap also needs to be consistent with the IEA/CSLF/G8 Recommendations which were finalized at the IEA-CSLF Workshop on Near-Term Opportunities for

CCS, 27-28 November 2007 in Calgary, Canada. These recommendations are being reviewed for possible action by the CSLF. The importance of integrated large-scale demonstration projects will be reflected in the roadmap update as a critical step to deployment of CCS. The update will also serve to identify areas to be addressed by new or extension of existing CSLF Projects.

The existing structure of the roadmap will remain in place. The status for each module is as follows:

- **Module 0 : Introduction, Positioning and Rationale**
  - Virtually complete – United Kingdom to complete.
- **Module 1 : Current Status of Technology**
  - Approximately 70% complete.
  - Update on CO<sub>2</sub> storage (IPCC report) – Australia has completed a draft.
  - Update on power station performance (McKinsey CCS Report of September 2008 and subsequent EU Zero Emissions Platform [ZEP] work due for release in November 2008) – United Kingdom is seeking assistance from another member.
- **Module 2 : Ongoing Activities in CCS**
  - A near complete revamping is needed, including “then-and-now” maps. This requires input from PIRT /Technical Group members.
- **Module 3 : Gap Identification**
  - Approximately 80% has been completed. Requires editing.
  - Using input from EU on CO<sub>2</sub> capture – United Kingdom to complete with assistance requested from other members.
  - A review draft on the storage section has been completed by Australia.
- **Module 4 : Roadmap and role of CSLF**
  - Editing is required together with identification of specific CSLF actions (consistency with Strategic Plan needed) – United Kingdom to complete.

The parties updating each module will try to send out their sections for comment at their earliest convenience to allow feedback earlier in the process. It was anticipated that individual modules would be distributed in December. The PIRT needs to identify the areas where assistance is needed and points of contact for each Member before the modules can be sent. Comments on the individual sections need to be sent to the Secretariat, who will then assemble the comments and forward them onto the relevant authors for each module. It was suggested that comments be solicited from the project sponsors of recognized projects.

The IEA is also developing a technology roadmap as part of its response to the G8 Action Plan. This exercise began in September 2008 and is scheduled for completion in May 2009. The focus will be on clean coal technologies and will include CCS. It was agreed that the IEA and CSLF roadmaps need to be aligned. Consistency of message is considered vital. The roadmaps need to be similar yet reflect the unique

perspectives of the distinct organizations preparing them. It was seen as beneficial to hold separate debates on the roadmap concepts within each organization. Rachel Crisp of the United Kingdom made a call for a high-level synopsis of both roadmaps.

There was agreement in principle to liaise and share information established at the IEA CCS Workshop in Paris on 6-7 November 2008. A meeting to reach agreement on commonalities was planned around the IEA CCS workshop, 2-3 February 2009.

#### **4. CSLF Secretariat Activities**

John Panek of the CSLF Secretariat gave a brief presentation covering the results of the value of the CSLF project recognition survey and provided a Strategic Project Implementation Report (SPIR) update. The PIRT instructed the Secretariat at the Al Khobar meeting in January 2008 to develop a brief questionnaire on the value of CSLF project recognition and conduct a survey of stakeholders and project sponsors. The Secretariat conducted the data collection effort in March 2008 and reported the survey results at the Cape Town meeting in April 2008. Due to the low response rate among project sponsors, the PIRT instructed the Secretariat to reissue its questionnaire to project sponsors who had not previously responded to the initial requests. The responses to the follow-up study have been combined with the initial results and are summarized below.

Project sponsors were asked the following questions:

1. What do you see as the value of CSLF recognition to a project sponsor?
2. What can be done to make CSLF recognition more attractive for project sponsors?

The most commonly reported value from CSLF project recognition was prestige or international exposure. Related to this is the view that CSLF recognition gives a project greater credibility. Another important consideration was the impact CSLF recognition has on a project's ability to attract funding. Project sponsors also saw CSLF recognition as a vehicle for creating opportunities to attract research partners and as a springboard for international collaboration. Another benefit is that it enables a project to be better informed on current events within the CCS community.

Project sponsors provided various suggestions for improving the attractiveness of CSLF recognition. Many would like the CSLF to increase its administrative and financial support to projects. This would entail funding the travel expenses of projects sponsors and assuming more information collection and reporting functions as a means of facilitating greater communications without placing additional burdens on project sponsors.

Project sponsors would like to see increased visibility and greater promotion of CSLF projects. Increasing the prestige of CSLF recognition was seen as important. One way to do this would be to revise the evaluation criteria for project recognition to make it more difficult to achieve. In that light, when a project receives CSLF recognition it would be seen as a significant accomplishment.

Respondents would also like to see enhanced communications and higher levels of collaboration within the CSLF, both between the CSLF and projects, and between

projects. This includes better access to information. Sponsors would like the CSLF to provide meetings for the CSLF recognized projects to get together and share information and discuss collaboration opportunities. Respondents would like to see more changes for project sponsors to work together. Sponsors also want more occasions for project sponsors to be involved in CSLF meetings. One possibility would be to provide podcasts of CSLF meetings for the benefit of all those interested parties that are unable to travel.

John Panek provided a brief update on which CSLF-recognized projects had been sending in quarterly updates for the SPIR. Of the 20 recognized projects, three are now complete and are no longer being asked for updates. Of the remaining seventeen projects, the response rate has been good – thirteen had been represented in the October 2008 SPIR. The following projects have submitted SPIRs for every quarter: Alberta Enhanced Coal-Bed Methane Recovery Project, CO<sub>2</sub> Capture Project, Regional Carbon Sequestration Partnerships, and the Zama Acid Gas EOR, CO<sub>2</sub> Sequestration, and Monitoring Project.

#### **5. Report on Coordination with CSLF Strategic Plan Task Force**

Nick Otter provided an update on the activities of the task force. Rachel Crisp (Vice Chair of the CSLF Policy Group) provided additional comments, mainly that the CSLF Strategic Plan update will center on CSLF-IEA recommendations made to the G8.

#### **6. Summary of Previous Year CSLF Workshops and Ideas for Possible Future Activities**

John Panek of the CSLF Secretariat briefly covered recent and future CSLF task force meetings and workshops. The Capacity Building in Emerging Economies Task Force held its sixth workshop concurrent to CSLF Technical Group meeting, 16-20 November 2008. Previous Capacity Building workshops were held in Pittsburgh, USA, 7-11 May 2007; Porto Alegre, Brazil, 18-19 October 2007; Mexico City, Mexico, 9-10 July 2008; and Salvador, Brazil, 9-10 September 2008. The IEA-CSLF Workshop on Near-Term Opportunities for CCS was held for the second time 21-22 June 2007 in Oslo, Norway, and the third time 27-28 November 2007, in Alberta, Canada. A Financial Issues Task Force meeting was held 11-12 October 2007 in New Delhi, India. The Technical Group met twice over the past year; 27-29 January 2008 in Al Khobar, Saudi Arabia, and 13-17 April 2008 in Cape Town, South Africa. The PIRT held meetings prior to each of these Technical Group meetings and also on 23-24 September 2008, in Canberra, Australia.

Upcoming CSLF meetings include a meeting of the Financial Issues Task Force, 2-3 December 2008, New Delhi, India; a PIRT meeting, 4-5 February 2009, Paris, France; a CSLF Technical Group Meeting, 1-2 April 2009, Oslo, Norway; and the Third CSLF Ministerial Meeting, currently scheduled for 16-18 November 2009 in London, United Kingdom. PIRT meetings will be held before the Oslo and London meetings.

## **7. PIRT Membership and Chair Issues / New Business**

Nick Otter will remain PIRT Chair for the present time. The consensus view of Members was that a change in leadership in the midst of the technology roadmap update, and with the CSLF Ministerial meeting coming up, was not in the best interests of the PIRT. Discussion on leadership rotation was planned for the next meeting. France has volunteered to join the PIRT and was welcomed in the group.

## Action Items

Item	Lead	Action
1	European Commission	Forward the link on EC FP7 proposals projects to the Secretariat
2	United Kingdom	Complete a draft of Module 0: <b><i>Introduction, Positioning and Rationale</i></b> for the CSLF Technology Roadmap and forward this to the Secretariat by early December for dissemination to the points of contact for each Member.
3	Australia and United Kingdom	Complete a draft of Module 1: <b><i>Current Status of Technology</i></b> for the CSLF Technology Roadmap and forward this to the Secretariat by early December for dissemination to the points of contact for each Member and CSLF-recognized projects.
4	PIRT/Technical Group Members	Provide input for Module 2: <b><i>Ongoing Activities in CCS</i></b> from Members
5	United Kingdom	Complete a draft of Module 3: <b><i>Gap Identification</i></b> for the CSLF Technology Roadmap and forward this to the Secretariat by early December for dissemination to the points of contact for each Member and CSLF-recognized projects.
6	United Kingdom	Complete a draft of Module 4: <b><i>Roadmap and Role of CSLF</i></b> for the CSLF Technology Roadmap and forward this to the Secretariat by early December for dissemination to the points of contact for each Member and CSLF-recognized projects.
7	PIRT	Complete an advanced draft in time for the 1-2 April 2009 CSLF Technical Group meeting in Oslo, Norway.
8	PIRT	Plan a meeting with the IEA around the IEA CCS workshop, 2-3 February 2009, to share information and reach an agreement on commonalities between the IEA and CSLF technology roadmaps.
9	PIRT	Next PIRT meeting scheduled for 4-5 February 2009 in Paris, France