



MEETING SUMMARY

Projects Interaction and Review Team (PIRT) Meeting
Rome, Italy
17 April 2013

Prepared by the CSLF Secretariat

LIST OF ATTENDEES

Acting Chairman

Christopher Consoli (Australia)

CSLF Delegates

Canada:	Stefan Bachu, Eddy Chui
China:	Xiaochun Li, Qi Li
European Commission:	Jeroen Schuppers
France:	Didier Bonijoly
Germany:	Jürgen-Friedrich Hake
Italy:	Giuseppe Girardi, Sergio Persoglia
Japan:	Ryozo Tanaka
Netherlands:	Paul Ramsak
Norway:	Trygve Riis
Russia:	Georgy Ryabov
Saudi Arabia:	Ahmed Aleidan, Khalid Abuleif, Hamoud Alotaibi
South Africa:	Tony SurrIDGE
United Kingdom:	Suk Yee Lam, Philip Sharman
United States:	Mark Ackiewicz, George Guthrie

CSLF Secretariat

John Panek, Richard Lynch

Project Sponsors

Uthmaniyah EOR Project:	Ali Al-Meshari (Saudi Arabia)
Alberta Carbon Trunk Line:	represented by Stefan Bachu (Canada)
UNIS CO ₂ Lab:	Alvar Braathen (Norway)

Observers

Australia:	Andrew Feitz
Chinese Taipei:	Chi-Wen Liao
Global CCS Institute:	Angeline Kneppers
Norway:	Lars Ingolf Eide, Olav Hansen, Kei Ogata
United States:	Robert Finley, Sallie Greenberg, Susan Hovorka

1. Welcome and Summary of Previous PIRT Meeting

Acting PIRT Chairman Christopher Consoli of Australia welcomed participants to the 19th meeting of the PIRT and provided a brief summary of the October 2012 PIRT meeting in Perth, Australia. At that meeting the PIRT reached consensus on the following:

- Recommended that the South West CO₂ Geosequestration Hub Project and the CarbonNet Project be approved by the Technical Group and be presented for CSLF recognition at the Policy Group meeting.
- Recommended that the Technical Group adopt the simplified Gaps Checklist as part of the CSLF Project Submission Form.

The Technical Group subsequently accepted these recommendations at its meeting in Perth.

2. Adoption of Meeting Agenda

The meeting Agenda was adopted with no changes.

3. Introduction of Meeting Attendees

PIRT meeting attendees introduced themselves. In all, fifteen CSLF delegations were represented at the meeting.

4. Approval of Meeting Summary from Perth PIRT Meeting

The Meeting Summary from the October 2012 PIRT meeting in Perth was approved as final with no changes.

5. Report from CSLF Secretariat

John Panek reported that there are two newly-completed CSLF-recognized projects, the IEA GHG Weyburn-Midale CO₂ Monitoring and Storage Project and the Demonstration of an Oxyfuel Combustion System Project. There are currently 27 active and 12 completed CSLF-recognized projects. Mr. Panek also stated that three additional projects have been nominated for CSLF recognition at this meeting.

6. Review and Approval of Projects Nominated for CSLF Recognition

The following three projects had been nominated for CSLF recognition:

- Uthmaniyah CO₂-EOR Demonstration Project (nominated by Saudi Arabia and the United States)
- Alberta Carbon Trunk Line (nominated by Canada and the United States)
- UNIS CO₂ Lab (nominated by Norway and the United States)

Presentations on each of these projects were made by representatives of the project sponsors.

Uthmaniyah CO₂-EOR Demonstration Project

Ali Al-Meshari, Overall Carbon Management Coordinator of Carbon Strategy for Saudi Aramco, gave a presentation about the Uthmaniyah CO₂-EOR Project. This large-scale project, located in the Eastern Province of Saudi Arabia, will capture and store approximately 800,000 tonnes of CO₂ per year from a natural gas production and processing facility, and will include pipeline transportation of approximately 70 kilometers to the injection site (a small flooded area in the Uthmaniyah Field). The

objectives of the project are determination of incremental oil recovery (beyond water flooding), estimation of sequestered CO₂, addressing the risks and uncertainties involved (including migration of CO₂ within the reservoir), and identifying operational concerns. Specific CO₂ monitoring objectives include developing a clear assessment of the CO₂ potential (for both EOR and overall storage) and testing new technologies for CO₂ monitoring. Construction of the capture facility and the pipeline is underway. The project duration is expected to be 4-5 years total, starting in 2013/2014.

After brief discussion, there was consensus by the PIRT to recommend approval of the Uthmaniyah CO₂-EOR Demonstration Project by the Technical Group.

Alberta Carbon Trunk Line

Stefan Bachu, representing project sponsor Enhance Energy Inc., gave a presentation about the Alberta Carbon Trunk Line (ACTL) Project. This large-scale fully-integrated project will collect CO₂ from two industrial sources (a fertilizer plant and an oil sands upgrading facility) in Canada's Province of Alberta industrial heartland and transport it via a 240-kilometer pipeline to depleted hydrocarbon reservoirs in central Alberta for utilization and storage in EOR projects. The pipeline is designed for a capacity of 14.6 million tonnes CO₂ per year although it is being initially licensed at 5.5 million tonnes per year. The pipeline route is expected to stimulate EOR development in Alberta and may eventually lead to a broad CO₂ pipeline network throughout central and southern Alberta. Pipeline right-of-way clearing began in February 2013 with commissioning expected in 2014 and start of operations in 2015. When in full operation, this will be the world's largest CCS project in terms of capacity.

After brief discussion, there was consensus by the PIRT to recommend approval of the Alberta Carbon Trunk Line Project by the Technical Group.

UNIS CO₂ Lab

Alvar Braathen, Professor of Arctic Geology at the University Centre in Svalbard (UNIS), gave a presentation about the UNIS CO₂ Lab Project. This research-oriented project is located near Longyearbyen, Norway, in the Svalbard Archipelago (78°N latitude) and is intended to identify challenges for CCS and study CO₂ storage in an unconventional reservoir under difficult arctic conditions. The project includes research on storability of CO₂ at Svalbard, including injection tests, geologic analyses, and studies on cap rock integrity, as well as design of collegiate-level courses on CO₂ storage and other educational outreach. However, uncertainty about project funding and also the future of the existing coal-fueled power station at Longyearbyen has resulted in the project having to plan for three different scenarios: full CO₂ capture from the power plant; small-scale CO₂ capture involving development of a pilot plant; and no CO₂ capture, which would result in the project emphasizing its educational aspects.

Ensuing discussion centered on the uncertainty about the project's future. In the end, there was consensus by the PIRT to defer further action on this project until the next PIRT meeting when it might be known which of the three paths the project would take.

7. Review of CSLF Project Submission Form

Dr. Consoli provided a brief history of the Project Submission Form. It originated at the November 2006 Technical Group Meeting in London, as a means for the PIRT to gather sufficient information to make informed decisions on whether or not to recommend approval of projects nominated for CSLF recognition. One of the features of the Form is

a Gaps Checklist, which was revised at the October 2012 PIRT meeting in Perth to a concise one-page listing and subsequently approved by the Technical Group. Dr. Consoli mentioned that other parts of the Form are also now in need of updating, as the focus of the CSLF has transitioned from research and pilot projects to large-scale demonstrations of CCS technologies. To that end, the CSLF Secretariat prepared a document that suggested areas on the Form where revisions may be needed.

Of the areas recommended for revision, there was no consensus to eliminate the “Project Elements” and “Relevance to Gaps Analysis” sections, while there was agreement to revise the “Information Availability” section to eliminate the request for projects sponsors to provide information about the relevance of the project to the overall aims of the CSLF and to CCS technology in general. There was also agreement to re-title the Gaps Analysis Checklist as the “CSLF Project Elements Checklist” (as some of the items in the list are not gaps) and to allow project nominators to email the Secretariat their intention to nominate as an acceptable alternative to a signature on the Form. Action on one other area of the Form, the section on “Information Availability”, was deferred because of its complexity and due to time constraints. Dr. Consoli stated that alternative language for this section would be worked out via email exchange between PIRT members and would be reported at the next PIRT meeting. There was agreement that the current version of the Project Submission Form would continue to be used pending agreement on a complete revision of the Form.

8. Discussion of Knowledge-Sharing from CSLF-Recognized Projects

Dr. Consoli mentioned that this item was on the PIRT Agenda as a follow-up to the October 2012 Technical Group Meeting in Perth, where the Technical Group deferred activity on the “Best Practices Knowledge Sharing” action of the Technical Group’s Action Plan because the Global Carbon Capture and Storage Institute (GCCSI) is already active in this area. Since then, the GCCSI has proposed the creation of a new “Knowledge Hub” website that could be “co-branded” with the CSLF and would serve as a gateway to a broad range of information on CCS technologies. This would include connections to other knowledge-sharing sites such as the European CCS Demonstration Project Network. Dr. Consoli stated that the GCCSI Knowledge Hub website could also include a CSLF Members-Only section, if desirable, and that any material posted to this website would be translated into multiple languages.

Ensuing discussion gave a favorable review to this concept and there was consensus that the PIRT would take on any activities related to the Action Plan’s “Best Practices Knowledge Sharing” action. However, in light of the amount of detail that would have to be worked out with the GCCSI to implement any co-branded knowledge sharing activity, further consideration of the GCCSI’s “Knowledge Hub” concept was deferred until the next PIRT meeting.

9. Adjourn

Dr. Consoli stated that due to time constraints, the agenda item on possible other future roles for the PIRT in the Technical Group Action Plan would be deferred until the next PIRT meeting. Dr. Consoli thanked the attendees for their participation and adjourned the meeting.

Summary of Consensus Reached

- The PIRT recommends approval by the Technical Group for the Uthmaniyah CO₂-EOR Project and the Alberta Carbon Trunk Line Project.
- Consideration of the UNIS CO₂ Lab Project is deferred until the next PIRT meeting.
- Continue use of the current CSLF Project Submission Form pending agreement on a complete revision to the Form.
- The PIRT would take on any activities related to the Technical Group Action Plan's "Best Practices Knowledge Sharing" action.
- Consideration of the Knowledge Hub proposal is deferred until the next PIRT meeting.



Acting PIRT Chair Christopher Consoli



Ali Al-Meshari introduces the Uthmaniyah CO₂-EOR Demonstration Project



Stefan Bachu introduces the Alberta Carbon Trunk Line Project



Alvar Braathen introduces the UNIS CO₂ Field Lab Project