



Minutes of the Joint Meeting of the Policy and Technical Groups

Warsaw, Poland

Friday, 08 October 2010

LIST OF ATTENDEES

Policy and Technical Group Delegates

Policy Group Chair:	Victor Der (United States)
Technical Group Chair:	Trygve Riis (Norway)
Australia:	Clinton Foster, Bruce Murphy, Aleksandra Kalinowski
Brazil:	Daniel Lins, Paulo Rocha, Paulo Negrais Seabra, Marcelo Ketzer, Bernardo Stumm
Canada:	Stefan Bachu, Siddiq McDoom, Eddy Chui
China:	Sizhen Peng, Xin Li, Xiaochun Li
European Commission:	Estathios Peteves, Wiktor Raldow, Jeroen Schuppers
France:	Bernard Frois, Christian Oeser, Didier Bonijoly, Pierre Le Thiez
Germany:	Jürgen-Friedrich Hake
Greece:	Nikolaos Koukouzas
Italy:	Sergio Garribba, Giuseppe Girardi
Japan:	Takeshi Hirota, Noriaki Ozawa, Hirotada Bessho
Korea:	Chang-Keun Yi, Sung-Chul Shin
Mexico:	José Miguel González Santaló
Netherlands:	Harry Schreurs
Norway:	Tone Skogen, Jostein Dahl Karlsen, Kristoffer Stabrun
Poland:	Piotr Kisiel, Elżbieta Wróblewska
Saudi Arabia:	Abdulmuhsen Alsunaid, Khalid Abuleif
South Africa:	Tony Surridge, Landi Themba, Faizel Mulla
United Arab Emirates:	Keristofer Seryani
United Kingdom:	Jonathan Holyoak, Philip Sharman, Debbie Stockwell
United States:	James Wood, George Guthrie, Joseph Giove

CSLF Secretariat

Barbara McKee, Rich Lynch, Scott Miles, John Panek, Jeffrey Price

Observers

Netherlands:	William Spence (Shell)
Poland:	Erlend Fjosna (Bellona)
United Kingdom:	Luke Warren (Carbon Capture and Storage Association)
United States:	Chris Babel (LTI), Robert Gentile (LTI), Jeffrey Jarrett (LTI), Paul Loeffelman (AEP), Andrew Paterson (CCS Alliance)
Asian Development Bank:	Ashok Bhargava, A. Damodaran, Klaus Gerhaeusser, Clement Yoong
Clinton Foundation:	Tatiana Zervos
Global CCS Institute:	Bill Koppe
World Bank:	Natalia Kulichenko
World Energy Council:	Elena Nekhaev

1. Opening Remarks

Policy Group Chairman Victor Der introduced himself and Trygve Riis, Chair of the Technical Group.

2. Adoption of Agenda

The Agenda was adopted without change.

3. Review and Approval of Minutes from London Meeting

The draft minutes of the previous Joint Meeting of the Policy Group and Technical Group held in London, United Kingdom, in October 2009, had been circulated for comment to the Policy Group and Technical Group prior to the meeting and the final draft, which incorporated comments received, had been posted on the CSLF website. The minutes were approved without further change.

4. Review of London Meeting Action Items

Barbara McKee of the CSLF Secretariat reviewed the status of the action items, which were all completed.

In response to Action Item 2, that the Secretariat “determine how the Technical Group and Policy Group can best have a discussion together on the link between risk and liability,” Ms. McKee described the work that has been performed by the Technical Group and Policy Group in this area. She recommended that a Task Force be formed with participants from both the Policy and Technical Groups. She stated that the Secretariat believed it was important to have professionals from different technical, business and policy disciplines address this issue because they each have very different perspectives on risk and liability. Consensus was reached to form this Task Force. The United States will co-chair and Canada, China, and France volunteered to participate. Other Members were requested to inform the Secretariat by mid October if they wish to participate. In addition, Chairman Der asked the Chairmen of the Technical Group Task Force on Risk Assessment and the Policy Group Financing CCS Task Force, and the Secretariat to identify potential members of this Task Force. The Secretariat will also talk to delegates about volunteering to co-chair this new task force.

5. Report from the Policy Group

Chairman Der gave the report on the Policy Group meeting. Key points are as follows:

- The United Arab Emirates has joined the CSLF, bringing the number of CSLF Members to 25.
- Capacity building activities are resuming following the Program Plan approved in London.
- Collaboration with other international organizations is continuing.
- Work on financing is intensifying with a planned CSLF study on financing trigger points and a proposal from the Asian Development Bank for a US\$5 billion fund for CCS in developing countries.
- Planning for the 2011 Ministerial in China has started; Ministers will receive invitations by year end.
- The CSLF Terms of Reference and Procedures was amended to allow the Policy Group and Technical Group to each elect three Vice Chairs.

- China, Japan, and Mexico were elected as Vice Chairs of the Policy Group.
- A proposal for CSLF to present on CCS to the World Trade Organization (WTO) is being considered.

A first draft of the presentation to the WTO was handed out to Policy Group and Technical Group delegates. The Policy Group Chair asked delegates to provide comments on this draft within by the end of October.

6. Report from the Technical Group

Chairman Riis reported on two Technical Group meetings, in Pau, France in March 2010, and the previous day in Warsaw.

The meeting in Pau initiated the update of the CSLF Technology Roadmap, formed a Task Force to Assess Progress on Technical Issues Affecting CCS, developed a strategy for engaging CSLF-recognized projects, endorsed the Gorgon CO₂ Injection Project, initiated planning for a CSLF Projects Workshop, and visited the CSLF-recognized Lacq CCS Project.

The new Task Force to Assess Progress on Technical Issues Affecting CCS (chaired by Australia) has working groups in four areas: Capture Technologies (chaired by the United States), Transport and Infrastructure (chaired by the Netherlands), Storage and Monitoring (chaired by Canada), and Integration (chaired by the Global CCS Institute). Its first task will be to produce a revised technology gaps checklist. Interest in participation in these working groups by both Members and stakeholders is high. The Secretariat has asked stakeholders if they wished to participate in this Task Force.

The Technical Group recommended that the Policy Group also consider forming a Task Force for Assessing Progress in Closing Policy-Related Gaps such as regulatory issues.

Planning is underway for an update to the CSLF Technology Roadmap in 2011, as this is seen as a living document. In addition, the Risk Assessment Task Force is beginning its Phase II activities.

The Technical Group is planning to hold two future meetings. One meeting will be a workshop on CSLF projects focusing on storage and monitoring in early 2011 in Saudi Arabia combined with an extended PIRT workshop. The second will be a meeting of the full Technical Group and will be held in Alberta, Canada in May 2011.

In the discussion of the Technical Group presentation, Sergio Garribba of Italy asked that a diagram showing all the different task forces with participating countries and stakeholders be prepared. Chairman Der instructed the Secretariat to prepare this document.

7. Extending the Term of the CSLF

Chairman Der noted that the Technical Group has requested the term of the CSLF Charter be extended and asked Chairman Riis to explain the reasons for that request.

Chairman Riis explained that the Technical Group strongly recommended that the CSLF Charter be extended for several related reasons. Many critical projects are scheduled to go on beyond 2013. CCS is entering a new phase, where the scale of projects is increasing and the focus is becoming large-scale demonstration projects. In addition, many technical gaps and challenges are still to be addressed by the CSLF.

The discussion was then opened to Policy Group and Technical Group delegates. Australia, the European Commission, France, Germany, Italy, Korea, Mexico, Norway, Saudi Arabia, South Africa, the United Kingdom, and the United States all spoke in support of extending the term of the CSLF, but proposed the different end dates of 2020, 2023 and 2030. With respect to international CCS collaboration, Canada noted that much had changed in recent years since the CSLF Charter was originally signed. Tone Skogen of Norway suggested that an ad hoc working group be formed to consider issues related to the extension of the Charter, which was supported by Siddiq McDoom of Canada. However, rather than creating another working group, the Secretariat suggested that the Ministerial Steering Committee consider the issue.

Barbara McKee noted that the Charter states that the Members may extend the Charter only in writing, that this must be done by the Ministers, and that the logical time to do this would be in the Ministerial next year in China. The Secretariat will work with the Steering Committee for the Ministerial to see that the Charter extension could be considered by the Ministers.

Chairman Der directed the Steering Committee for the 2011 Ministerial to consider whether the Charter should be changed. Jürgen-Friedrich Hake of Germany stated that if the Charter was extended for a long period of time, there should be milestones to review progress perhaps every five years. He agreed to provide the Secretariat a prototype document of what the review should be. The Secretariat and the Steering Committee were directed to put together a package for the Ministerial that will include an extension of the Charter for a minimum of ten years, and review the Charter and recommend any changes due to changing conditions. Delegates are to send recommendations for Charter modifications to the Secretariat over the next several weeks to be considered by the Steering Committee. Volunteers for the Steering Committee include: Trygve Riis as Chair of the Technical Group, the European Commission, France, Italy, Japan, Mexico, Norway, Saudi Arabia, and the United States. Stakeholders who volunteered include the Asian Development Bank (Ashok Bhargava), the United Kingdom Carbon Capture and Storage Association (Luke Warren), and the World Energy Council (Elena Nekhaev).

8. Update of the CSLF Technology Roadmap

Chairman Riis described the most recent update to the CSLF Technology Roadmap. He stated that each of the five modules of the Roadmap had been significantly updated and that it covers the recent expansion of CCS activities. The focus of the 2010 CSLF Technology Roadmap is on:

- Achieving commercial viability and deployment of CO₂ capture, transport, and storage technologies; reduction in the energy penalty and cost related to CO₂ capture;
- Developing an understanding of global storage potential, including matching CO₂ sources with potential storage sites and infrastructural needs;
- Addressing risk factors to increase confidence in long-term CO₂ storage effectiveness; and
- Building technical competence and confidence through sharing information and experience from multiple demonstrations.

Module 4 of the Roadmap, in particular, describes the role of the CSLF and summarizes key milestones for CO₂ capture, transport, storage, demonstration, and integration to be achieved at present and in future periods through 2020 and beyond.

A few minor edits will be required to complete the Roadmap, but it should be final by mid October. Didier Bonijoly of France stated that he had information to update France's country profile. Chairman Riis responded that it must be received within the one-week period (by October 15), at the end of which the Roadmap would become final.

Chairman Riis recommended that the Roadmap be approved, and Policy Group delegates reached a consensus to do so.

9. Projects Proposed for CSLF Recognition

Chairman Riis stated that five projects had been reviewed by the PIRT and the Technical Group and approved to propose to the Policy Group for CSLF recognition. Presentations were made on each of the projects:

- CCS Belchatów Project in Poland, presented by Elżbieta Wróblewska of Poland, will demonstrate commercial-scale CO₂ capture at a utility power plant and is nominated by Poland, the European Commission, and the United States.
- CO₂ Field Lab Project in Norway, presented by Trygve Riis of Norway, will study methods for monitoring leakage from storage sites and is nominated by Norway, France, and the United Kingdom.
- Gorgon CO₂ Injection Project in Australia, presented by Clinton Foster of Australia, will demonstrate commercial-scale capture, transport and storage of CO₂ from a natural gas field and is nominated by Australia, Canada, and the United States.
- Quest CCS Project in Canada, presented by William Spence of Shell, will demonstrate commercial-scale capture, transport and storage of CO₂ from an oil sands processing facility and is nominated by Canada, the United Kingdom, and the United States.
- SECARB Early Test at Cranfield Project in the United States, presented by Joseph Giove of the United States, will demonstrate commercial-scale CO₂ storage in deep saline aquifers and is nominated by the United States, Canada, and the United Kingdom.

The Policy Group reached consensus to approve all five projects for CSLF recognition.

10. Report from CCS in the Academic Community Task Force

Marcelo Ketzer of Brazil, Chairman of this Task Force, described activities of the Task Force. The Phase I objective of the Task Force is to identify courses in the areas of CCS and Climate Change currently available inside the academic programs of universities worldwide. In that regard, Task Force activities have focused on North and South America, Europe, and Africa. Information on these courses and programs was gathered from a detailed keyword search of hundreds of university websites. Dr. Ketzer stated that a final report on Phase I is now being developed and should be sent to CSLF delegates in early 2011 for review and be completed before the CSLF Ministerial next year. A total of 76 graduate programs, including 60 masters programs and 16 PhD programs, were identified and described in detail. Programs in different countries were discussed.

At the suggestion of the Secretariat, China was invited to join this Task Force. Peng Sizhen of China thanked the CSLF and stated that China would consider joining.

Dr. Ketzer stated that Phase II of the Task Force's work would develop materials and curricula that could be used in a university. The assistance of CSLF was seen as being very useful in helping to accomplish this goal.

11. Review of Themes for 2011 CSLF Ministerial Meeting

Barbara McKee stated that two themes were raised in the Policy Group meeting the previous day:

- R&D and policy issues for CCS in developing countries; and
- Communication to the public that CCS can be safe.

Ms. McKee stated that it would ask Members for ideas for themes, circulate those received to the Members, solicit further ideas, and reactions to those shared from the Members, and then share all of these ideas with the Ministerial Steering Committee for consideration.

Both Policy Group and Technical Group were asked for ideas. Chairman Der suggested that the central themes include:

- The essential aspects of climate change mitigation must include CCS; and
- Develop the reasons for the continuation of the CSLF.

Rich Lynch of the Secretariat was asked to report on ideas for themes that were suggested in the Technical Group meeting the previous day. He reported three broad themes:

- Give the Ministers a sense of what we hope to achieve by 2020.
- Should we keep doing what we're doing or should we alter course in some way, keeping in mind that we have limited resources?
- Focus on CCS technologies as they pertain to China, for instance, the role of CCS in coal-to-liquids or in IGCC, CCS in industry, or enhanced coal-bed methane.

Other ideas suggested during this session were to:

- Demonstrate progress, challenges, and clearly put forward role of government and need for Ministerial support, particularly for financing;
- Give a message to ministers how developed and developing countries can work together to advance CCS; and
- For 2013 and 2020, identify the gaps and how we can help close them.

Tone Skogen made the broad comment that we need to give the Ministers some challenge in order to make the meeting one that Ministers would want to attend. In discussion, it was pointed out that the Ministers need to accomplish something themselves. It has to be a meeting, for example, where announcements of new initiatives, perhaps with a deployment focus, can be made.

12. New Business / Next Meeting

Elena Nekhaev of the World Energy Council gave a report from the CSLF stakeholders. She began by discussing the World Energy Congress held during September 2010 in Montreal. This meeting was attended by over 7000 participants and 70 energy Ministers. There was a special session devoted to CCS, which was very popular. Ms. Nekhaev noted that in an opinion survey of energy issues done by the World Energy Council, CCS is now considered a critical uncertainty compared to other technologies.

Ms. Nekhaev also presented the results of a search of headlines related to CCS compared to other energy technologies. The results were that CCS was rarely mentioned; that is, CCS is not making headlines the way other energy options are. The story of CCS is not being told effectively. She said that there is a need for a greater effort to establish

partnerships with media. Ms. Nekhaev also stated that stakeholder companies could potentially raise money to fund this.

Discussion centered on the challenges of getting the messages of CCS and the CSLF out through the media to the public and to Ministers. Chairman Der asked the Secretariat to engage with other organizations such as the World Energy Council to review best practices for how to move media communications on CCS forward before, during and after the Ministerial.

Chairman Der also reminded the delegates to provide comments on the draft presentation to the WTO. Piotr Kisiel of Poland inquired as to who would give the presentation. In response, Chairman Der asked the Secretariat to find someone to give that presentation.

13. Closing Remarks

Chairman Der stated that he was pleased with the progress made in these meetings by both the Policy Group and Technical Group. He invited delegates to continue to think about and suggest themes for the Ministerial. Dr. Der thanked Poland for its hospitality in hosting the meeting.

ACTION ITEMS ARISING FROM THE JOINT MEETING OF THE POLICY AND TECHNICAL GROUPS

Item	Lead	Action
1	Members	Inform the Secretariat if they want to participate in the new Task Force on Risk and Liability by mid October 2010.
2	Risk Assessment Task Force Chair, Financing Task Force Chair, Secretariat	Identify potential members of the new Policy and Technical Group Task Force on Risk and Liability.
3	Secretariat	Check with Policy Group delegates about volunteering to co-chair this new Task Force.
4	Members	Comment on the draft WTO presentation by late October 2010.
5	Policy Group	Consider a Task Force on Assessing Progress in Closing Policy-related Gaps.
6	Secretariat	Prepare an organization chart mapping out the various task forces and participants in those task forces.
7	Germany	Provide the Secretariat a prototype document of what a periodic review of progress for the CSLF should be.
8	Secretariat, Ministerial Steering Committee	Put together a package for the Ministerial that will review the CSLF Charter and recommend any changes due to changing conditions.
9	Secretariat	Support implementation of procedures to modify the Charter to extend the term of the CSLF and make any changes as recommended by the Ministerial Steering Committee and accepted by the Members.

Item	Lead	Action
10	Technical Group	Finalize the 2010 CSLF Technology Roadmap by mid October 2010.
11	Members	Provide suggestions for themes for the Ministerial meeting to the Secretariat for consideration by the Ministerial Steering Committee.
12	Secretariat	Engage with other organizations to learn best practices to move media communications on CCS and coverage of the Ministerial forward.
13	Secretariat	Finalize the WTO presentation and find someone to give the CSLF presentation to the WTO.