



**Minutes of the Policy Group Meeting
Warsaw, Poland
Thursday, 30 October 2014**

LIST OF ATTENDEES

Chair

Christopher Smith, United States

Policy Group Delegates

Australia: Zoe Naden
Brazil: Giuliano Ventura
Canada: Kathryn Gagnon, Eddy Chui
China: Sizhen Peng, Xian Zhang, Chenyong Sun
France: Bernard Frois
Japan: Ryoza Tanaka, Takashi Kawabata
Korea: Chang Keun Yi, Seung Phill Choi
Mexico: Giselle Pérez
Norway: Tone Skogen, Fredrik Netland
Poland: Marcin Korolec, Piotr Kisiel
Saudi Arabia: Hamoud Al-Otaibi
South Africa: Gina Downes, Landi Themba
United Kingdom: Tony Ripley
United States: Jarad Daniels, John Litynski

Representatives of Allied Organizations

Global CCS Institute: Andrew Purvis
IEA: Juho Lipponen, Tristan Stanley

CSLF Secretariat

Richard Lynch, Adam Wong

Invited Speakers

Tomasz Dąbrowski, Director, Department of Energy, Ministry of Economy, Poland
Trygve Riis, Technical Group Chair, Norway

Observers

Netherlands: Tim Bertels
Poland: Adam Normark, Anna Madyniak, Janusz Reiter, Adam Wóćicki
South Africa: Tony Surrridge
United Kingdom: Luke Warren
United States: Damian Bednarz, Geoffrey Lyon, Jim Wood, Barry Worthington

1. Welcome and Opening Statement

The Chairman of the Policy Group, Christopher Smith, called the meeting to order and welcomed delegates and observers to Warsaw. He thanked Poland for hosting the 2014 CSLF Annual Meeting, and also acknowledged the hard work by the various CSLF Task Forces, the CSLF Technical Group, and the CSLF Secretariat.



Christopher Smith

2. Introduction of Delegates

Policy Group delegates introduced themselves. Fourteen of the twenty-three CSLF Members were present, including representatives from Australia, Brazil, Canada, China, France, Japan, Korea, Mexico, Norway, Poland, Saudi Arabia, South Africa, the United Kingdom, and the United States. Observers representing the International Energy Agency, Global CCS Institute, the Netherlands, Poland, South Africa, the United Kingdom, and the United States were also present.

3. Host Country Welcome

Tomasz Dąbrowski, Director of the Energy Department at Poland's Ministry of Economy, welcomed the CSLF Policy Group to Warsaw and thanked the CSLF for allowing Poland the opportunity to host. Mr. Dąbrowski provided remarks regarding Poland's use of coal, and noted the interest Poland has in all clean coal technologies. Mr. Dąbrowski stressed that now is an important time for the world to provide serious attention and huge investments to reduce carbon emissions.



Tomasz Dąbrowski

4. Adoption of Agenda

The Agenda was adopted without change.

5. Review and Approval of Minutes from London

The Minutes from the CSLF Policy Group Meeting on 5 June 2014 in London were approved without change.

6. Secretariat Report on London Meeting Action Items

Adam Wong provided a brief summary of the action items from the CSLF Policy Group Meeting on 5 June 2014 in London. All action items have been completed.

7. Recent and Current CCS Issues

Juho Lipponen provided a thorough background framing of recent climate policy meetings, including the United Nations Climate Summit 2014, the Greenhouse Gas Control Technologies (GHGT-12) Conference, and the United Nations Framework



Juho Lipponen

Convention on Climate Change (UNFCCC) Technical Expert Meeting on CCUS. Mr. Lipponen noted that the recent opening of Canada's Boundary Dam Project, the world's first commercial-scale power plant retrofit with CCS, has changed the CCS conversation, as the argument against CCS is now off the table.

8. Update from CSLF Technical Group

Trygve Riis provided an update from the CSLF Technical Group. At its meeting on Tuesday, 28 October 2014, the Technical Group voted to recommend the Norcem CO₂ Capture Project to the Policy Group for CSLF recognition. The Technical Group is also planning to produce an update report on the CSLF Technology Roadmap in time for the next CSLF Ministerial Meeting in 2015. The Technical Group will also continue its collaboration with the Policy Group on "Supporting Development of 2nd and 3rd Generation CCS Technologies" with Canada and Norway as leads. Other task force members will include Japan, Korea, the United Kingdom, the United States, and the IEA GHG.



Trygve Riis

Other consensus reached from the recent Technical Group Meeting included an announcement that the Review of CO₂ Storage Efficiency in Deep Saline Aquifers Task Force has concluded its work and will disband following the publication of its journal paper, the Technical Group will not form a task force to address the Action Plan item on "CCS with the Industrial Emissions Sources", and the Technical Group will not yet form a task force to address the Action Plan item on "Energy Penalty Reduction".

After the update from Mr. Riis, there was consensus to approve the Norcem CO₂ Capture Project for CSLF recognition.

9. Discussion of Exploratory Committee Work Plan:

a. Supporting Development of 2nd and 3rd Generation CCS Technologies

Trygve Riis began the discussion by providing an overview of 2nd and 3rd generation technologies, along with challenges and suggested actions. Kathryn Gagnon presented on the possibility of a site map for 2nd and 3rd generation CCS technologies. Ms. Gagnon suggested that this site map could be a living document that would be updated by projects and developers as the technologies evolve. It was agreed that Canada would lead the effort to include mapping initiatives and funding mechanisms, while Norway would lead the efforts to both identify promising technologies, along with how to efficiently test these new technologies. The ultimate goal would be for this group to prepare and present a policy document on how to accelerate implementation of 2nd and 3rd generation capture technologies. Canada will lead this policy-facing effort, with the expectation that all countries supporting this task will actively be involved in the drafting of this document. The European Commission, Japan, Korea, the United Kingdom, and the United States will also support this effort. This task group will draft deliverables to



Kathryn Gagnon

discuss at the next Policy Group meeting, with an overall goal of a policy-facing document to present to the Ministers.

b. Global Collaboration on Large-Scale CCS Projects

Jarad Daniels and Sizhen Peng led a discussion on how the CSLF might facilitate global collaboration on large scale integrated projects. There is an interest in deep saline formations, as there is plenty of enhanced oil recovery data. After the discussion, a consensus was



Sizhen Peng

reached that the United States and China should continue working to identify opportunities for the CSLF to add significant value to large saline projects, to include both projects that were discussed and other projects that

members might identify in the coming months. This effort shall include discussions with countries on potential in-kind and financial resources that might be brought to the table. The work should also include discussions with project developers on opportunities to add or expand technical value to existing efforts. The goal will be to provide specific

opportunities to discuss at the next Policy Group meeting, with an eventual target towards deliverables for the CSLF Ministers to announce at the Ministerial Meeting in 2015.



Jarad Daniels

c. Financing for CCS Projects

The Financing CCS Task Force Chair, Bernard Frois, and Jim Wood of the U.S.-China Clean Energy Research Center then framed the conversation on financing for CCS projects. Dr. Frois provided a review and summary of his recent financing workshop held on 15 October 2014, in Washington, D.C. This workshop demonstrated that there is growing interest in CCS, but that government assistance is still essential.



James Wood

Discussions included the potential effects of recent draft United States

Environmental Protection Agency regulations impacting CCS. Mr. Wood highlighted the importance of partnerships for financing CCS projects in Asia, and provided thoughts on the opportunities to actively manage reservoir pressures through water withdrawal and freshwater co-production. Dr. Frois concluded that lessons learned from existing projects have important impact, and that stable government systems are requisite for projects to succeed. It was noted that dialogue with financial institutions are increasing, and understanding and trust are



Bernard Frois

building. CSLF participants were encouraged to provide input to Dr. Frois on how to best continue engaging the financial communities, while also working to progress financing opportunities for CCS projects.

d. Communications

Juho Lipponen started the discussion on CSLF Communications and provided suggestions from the Communications Task Force, which is led by Saudi Arabia with support from the IEA and the Global CCS Institute. A recommendation was made to hire a communications professional to help frame a communications strategy, and the task force was asked to pursue member contributions to enable this. It is estimated that the cost for a communications professional would be between US \$30,000-60,000. It was noted that the CSLF should strive to pass the CSLF message to other multilateral meetings. The task force was asked to continue to refine key messages to focus on and deliver at a variety of levels and thru various potential international mechanisms, such as the UNFCCC.

10. Stakeholder Recommendations to CSLF

Barry Worthington of the United States Energy Association and Luke Warren of the Carbon Capture and Storage Association provided stakeholder recommendations to the CSLF. Mr. Worthington highlighted recommendations for CCS being pursued by the United Nations Economic Commission for Europe. The recommendations included policy parity for CCS, the need for protection of intellectual property under any crediting mechanism, that a broad array of fiscal instruments should be made available to support CCS (but the selection should not be mandated), and the need for government support for CCS demonstration projects, particularly between developed and developing nations. Recommendations are also being put forward for CCS specifically in developing countries, the sharing of credits, credit for CCS thru enhanced oil recovery, public outreach and communications for CCS as part of a carbon reduction strategy, etc.



Barry Worthington



Luke Warren

Mr. Warren detailed the recent European 2030 Climate and Energy Framework agreed to last week on 23 October, which includes explicit recognition of CCS, and the need for additional funding for innovative technologies, such as the NER 400. Mr. Warren also summarized the U.K. CCS Commercialization program, which has many merits to support CCS. He also provided updates on several CCS projects being pursued in the United Kingdom, and noted the U.K.'s CCS Policy Scoping Document that will provide stakeholder input for consideration from the United Kingdom's Department of Energy and Climate Change. Mr. Warren also mentioned that the U.K. is keen on pursuing industrial CCS opportunities and highlighted the Tees Valley City Deal.

Mr. Worthington congratulated the CSLF for the decision to actively pursue better communications, although much work is still required. Mr. Worthington suggested that

the CSLF should consider stakeholder corporations to both help support CSLF communication efforts, and also move communications on CCS forward. Mr. Worthington recommended that the CSLF consider changing its name to remove the word “sequestration.” The stakeholders also commended the CSLF financing efforts. Stakeholders seek to improve and increase their engagement at next year’s Ministerial Meeting, and look forward to presenting their thoughts and ideas at the next CSLF Meeting in Canada. The stakeholders suggested that a core ministerial theme or message should be on public acceptance, supported by better communications.

11. CSLF Input to the Next CEM Meeting

Jarad Daniels stressed the need for CCS to be included in the key messages document at the upcoming CEM meeting. The United States will work on getting a CCS session on the agenda. The CEM preparatory meeting, hosted by the United States, will take place on 25-26 March 2015 in Washington, D.C. CEM6 (minister-level meeting), will take place 27-28 May 2015 in Mexico, with the specific location still to be determined.

12. Planning for 2015 CSLF Meetings

Richard Lynch announced that the next CSLF meeting will be in June 2015 in Regina, Saskatchewan, Canada. This will be a five day meeting, organized as follows:

- Day 1: PIRT meeting (in afternoon)
- Day 2: Technical Group Meeting
- Day 3: Technology Workshop
- Day 4: Visit to CSLF-recognized Boundary Dam Project
- Day 5: Policy Group Meeting

Mr. Lynch stated that further details concerning the Regina meeting would be forthcoming soon. Hamoud Al-Otaibi announced that Saudi Arabia will be hosting the 6th CSLF Ministerial in the fourth quarter of 2015. Exact dates for this meeting will be announced when available.

13. Action Items and Next Steps

The Policy Group reached a consensus on the following items:

- The Norcem CO₂ Capture Project was approved for CSLF recognition.
- Any input regarding financing CCS should be provided to France.

Action items from the meeting are as follows:

Item	Lead	Action
1	Canada and Norway	Prepare a draft policy document on how to achieve accelerated implementation of 2 nd and 3 rd generation CCS technologies, to also include CCS outside of the power sector
2	China and United States	Provide specific recommendations regarding how the Policy Group can propose that the CSLF Ministers support a large-scale integrated project, whether it a new or existing project

Item	Lead	Action
3	Saudi Arabia, IEA, Global CCS Institute	Investigate potentially funding a professional for CCS communications, while also finding a way to get key CSLF messages to a wider audience
4	United States	Engage to get CCS on the agenda for the Clean Energy Ministerial
5	Saudi Arabia and CSLF Secretariat	Announce a date for the 2015 CSLF Ministerial Meeting
6	CSLF Secretariat	Distribute more information on UNFCCC recognition
7	Canada and CSLF Secretariat	Explore changing the dates for the 2015 CSLF Mid-Year Meeting in Regina, Canada

14. Open Discussion and New Business

Tone Skogen summarized the status of the CSLF Capacity Building Program, which is undergoing a transition of the remaining Capacity Building Program Funds from the United States Department of Energy to the Global CCS Institute. Once this transition is complete, the CSLF Capacity Building Program can then proceed with new capacity building efforts.

A conversation was also held regarding UNFCCC recognition, and it was agreed that the CSLF Secretariat would research this and provide the necessary information.

15. Closing Remarks / Adjourn

Jarad Daniels provided a summary of the day's meetings, and noted the significant recommendations and action items. Chris Smith provided the closing remarks. Mr. Smith stressed the need for the CSLF to continue to engage all countries, including countries outside of the CSLF. He thanked the host country Poland, the CSLF Secretariat, and all the meeting attendees.