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POLICY GROUP

Status Report of the Task Force on Capacity Building in Emerging Economies

Note by the Secretariat

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Background

At the meeting of the Policy Group in Berlin, Germany, in September 2005, the Secretariat delivered a plan to assist emerging economy CSLF Members to develop the knowledge, skills and expertise they need to implement Carbon Capture and Storage projects and activities. At that time, creation of a Task Force was recommended that would be comprised of CSLF Members from both developed and emerging economies members and include delegates from the Policy and Technical Groups. This Task Force currently consists of the United States (lead), Australia, Canada, Colombia, India, Italy, Mexico, Saudi Arabia, and South Africa. At the meeting of the Policy Group in Delhi, India, in April 2006, the Task Force reported that it planned to conduct a high-level capacity building workshop that would be attended by decision makers and also planned to assist each emerging economy Member develop its own customized CCS work plan. This paper is a progress report of the Task Force's activities since the CSLF meeting in Delhi, India, in April 2006.

Action Requested

The Policy Group is requested to review and consider the progress report of the Task Force on Capacity Building in Emerging Economies.

Conclusions

The Policy Group is invited to note in the Minutes of its next meeting that:

“The Policy Group reviewed and considered the progress report of the Task Force on Capacity Building in Emerging Economies.”



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STATUS REPORT OF THE TASK FORCE ON CAPACITY BUILDING IN EMERGING ECONOMIES

BACKGROUND

Carbon capture and storage (CCS) is an emerging technology that is not completely well known or understood by the technical and scientific communities and the public at large. Its application, however, is crucial if the use of fossil fuel-based energy is to continue. Industrialized nations around the world are increasingly aware and involved in learning the basics, new developments, and applications of CCS but this is not necessarily the case in emerging economies.

As a response to this need, a CSLF initiative was proposed to assist emerging economy Members to build capacity for sequestration. The CSLF has six emerging economy Members – Brazil, China, Colombia, India, Mexico, and South Africa – that would benefit directly from this initiative.

TIMELINE

September 2004:

The CSLF Policy Group at its meeting in Melbourne, Australia in September 2004, requested that the Secretariat prepare a report on capacity building for emerging economies.

September 2005

The Secretariat provided the requested report at the CSLF Policy Group meeting in Berlin. Highlights of the report are:

The objectives of the proposed CSLF Capacity Building Initiative are:

- Identification of carbon sources and sinks and their storage capacity;
- Regional assessments, especially where opportunities cross borders;
- Understanding barriers (including legal and regulatory) to carbon sequestration;
- Project evaluation, structuring, and implementation;
- Research on carbon capture and storage;
- Financing of carbon sequestration activities; and
- Communications with stakeholders.

Upon request from the Secretariat, the CSLF Members from emerging economies provided the following views:

- The expertise and knowledge bases that they would require for each task,
- The resources available in each country to assist in capacity building,
- How these resources could be transferred to emerging economy CSLF Members, and
- The role each government would be willing to play in capacity building.

They also supplied the following broad area needs for capacity building:

- Identification of carbon sources and sinks and their storage capacity;
- Regional assessments, especially where opportunities cross borders;
- Understanding barriers (including legal and regulatory) to carbon sequestration;
- Project evaluation, structuring, and implementation;
- Research on carbon capture and storage;
- Financing of carbon sequestration activities; and
- Communications with stakeholders.

The Policy Group in Berlin opted to establish a Task Force on Capacity Building in Emerging Economies, which is chaired by the United States.

April 2006

At the CSLF Policy Group meeting in New Delhi, the Task Force proposed a Work Plan that included:

- A Consolidated Capacity Building (CCB) workshop for emerging economy CSLF Members
- Formation of country project groups
- Country assessments
- Country specific capacity building plan
- Country specific capacity building workshops
- Facilitation of project teams
- Evaluation of potential projects
- Implementation of carbon and capture storage projects

At this CSLF Policy Group meeting, Justin Swift, Chair of the Task Force, delivered an update on the activities of this Task Force and announced the plans for a high-level capacity building workshop.

Mr. Swift re-stated what has been established at the meeting in Berlin as the objectives of the proposed CSLF Capacity Building Initiative, namely:

- Assist emerging economy Members to develop the knowledge, skills, expertise and institutions they need to understand and implement carbon sequestration;

- Develop a set of informational, training and educational resources that all CSLF Members can utilize; and
- Identify, document and transfer lessons learned from the prior experience of CSLF-recognized projects and sequestration-related institution building.

It is anticipated that this initiative will accelerate the deployment of carbon sequestration throughout the world through the broader dissemination of knowledge, the building of expertise and institutions in emerging economies, and the intellectual cross-fertilization that occurs through collaboration.

THE CONSOLIDATED CAPACITY BUILDING WORKSHOP

Initially, it was proposed that the Consolidated Capacity Building (CCB) workshop for CSLF Members in Emerging Economies be held in Montana in collaboration with one of the U.S. regional sequestration partnerships; however, after further discussion, it was decided that the workshop would be held in Pittsburgh, Pennsylvania.

The workshop format was changed to take advantage of the unique opportunity for the workshop participants to attend the Sixth Annual Conference on Carbon Capture & Sequestration (www.carbonsq.com). This is the premier conference on CCS in the United States and will provide the workshop participants with the opportunity to hear the latest developments in CCS from world experts. This year, this event will be held in Pittsburgh, Pennsylvania, from May 8 to 10, 2007. The Capacity Building Workshop will be held on Monday, May 7, the afternoon of May 10, and Friday, May 11, 2007.

A Working Group (WG) was formed to conduct the day-to-day activities necessary to implement the CCB workshop. The WG issued invitations to the six emerging economies targeted for the workshop. Three countries replied initially: Brazil, India, and South Africa. Recently, Colombia has advised the WG that they intend to participate with a small delegation. To date, China and Mexico have not replied officially as to their participation.

Regarding financial arrangements, Petrobras has agreed to cover the travel expenses for the entire Brazilian delegation. Funding from U.S. Department of Energy and Natural Resources Canada will be used to cover the travel expenses for the delegations from India and South Africa as well as registration fees for the Sixth Annual Conference on Carbon Capture & Sequestration for all delegations. Given Colombia's late commitment to participate, this small delegation will cover its own expenses, except the conference registration.

The tentative agenda for the workshop participants is as follows:

Monday, May 7	First day of the Capacity Building Workshop
Tuesday, May 8	Sixth Annual Conference on Carbon Capture & Sequestration
Wednesday, May 9	Sixth Annual Conference on Carbon Capture & Sequestration
Thursday, May 10	Sixth Annual Conference on Carbon Capture & Sequestration Continuation of Capacity Building Workshop
Friday May 11	Last day of the Capacity Building Workshop including tour of NETL R&D facilities

The countries were asked for input on what they would like to see discussed at the CCB workshop.

Examples of specific items provided by the participating countries include:

- Partitioning of trapping mechanisms in CO₂ storage sites
- Mass balance of effectively stored CO₂ vs. methane and petroleum production (net storage gain during EOR and ECBM)
- Geochemical and geo-mechanical integrity of reservoir and cap rocks
- Desire to only address R&D topics, excluding policy issues (India's request)

As Chair of the CSLF Capacity Building Task Force, the U.S. Department of Energy is coordinating this workshop with support from its National Energy Technology Laboratory (NETL). The workshop syllabus is being developed by carbon sequestration experts and will reflect input from the CSLF emerging economy members.

A list of discussion topics for the Pittsburgh workshop is shown below:

Overview of the Issues and Need for Carbon Management

- Need for Carbon Management
- Portfolio of Solutions
- CCS
- CDM Credits

Capture

- Capture Technologies
- Compression
- Transportation
- Costs

Storage

- Sub-surface Primer
 - o Types of Formations
 - o Trapping Mechanisms
 - o Identification of Carbon Sinks
 - o Quantification of Sinks
- Security of Storage
- Injection Issues
- Worldwide Storage Projects

Measuring, Monitoring, and Verification

- Purpose and Need
- Technologies Available
 - o Subsurface Monitoring
 - o Surface/near surface monitoring

Stakeholder Involvement

- Public Education
- Outreach Best Practices
- DOE's Regional Partnership Model

Legal/Policy/Regulation

- Legal Issues related to CCS
- Policy that addresses CCS or needs for
- Regulation
 - o Permitting

Economics/Costs/Financing CCS Projects

- General Guidelines
- Case Studies

Tour of DOE's NETL R&D Facilities

Per the Task Force report presented at the New Delhi meeting, it is anticipated that all training materials used at the CCB event – modules, case studies, and other materials – will be incorporated into a training manual and developed in such a way that the author of the material is not the only trainer capable of presenting it. Training objectives will be established for the overall course and each training module. Evaluative criteria will be established to ensure that the training course accomplishes its stated objectives. All materials will be prepared in English. A database of trained individuals and certified trainers will be maintained by the CSLF Secretariat and published on the website.