

**Welcoming Remarks
by
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**Carbon Sequestration Leadership Forum
Capacity Building Workshop
for
Emerging Economy Countries**

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On behalf of the Carbon Sequestration Leadership Forum, on behalf of Office of Fossil Energy, the U.S. Department of Energy and Secretary Bodman, I want to offer each delegate to this workshop a warm welcome to the United States. It is our pleasure to be your host.

This is the Forum's first workshop on capacity building for carbon capture and storage in emerging nations. And it is one of the world's first in the maturing global effort to come to terms with climate change and the role of greenhouse gases in it.

Your official participation carries significance in this. It puts India, Brazil, Colombia, Mexico, South Africa and Saudi Arabia in the in the vanguard of the endeavor.

In the coming week you will be immersed in all aspects of CCS.

For this, the Forum has assembled an all-star and international faculty to give you a thorough look at CCS and its requirements. They come from the U.S., Canada, Australia and France. Many of these are the experts who literally and figuratively are writing the book on CCS.

In addition, you also will sit in on sessions of our annual, government-wide Carbon Sequestration Conference which is taking place concurrently. It too brings together experts from around the world. These talks can help bring you up to date on current developments in new-born art and science of carbon management.

And, you will visit the National Energy Technology Laboratory through which the Office of Fossil Energy conducts America's 10-year-old Carbon Sequestration Program, one of the worlds oldest, if not the oldest.

I urge you to fully explore anything that catches your interest.

Much of the world is talking about what to do.

But you are here to learn more about the most effective thing that the world can do.

Recent events in Thailand, a nation not represented here, illustrate the tension between concern about greenhouse gases and need for energy security.

Just last week in Thailand a working group of the Intergovernmental Panel on Climate Change met to discuss final preparations for a report on mitigating CO₂. The recommendations touched on CCS but called for steps to reduce coal use around the world.

Yet barely a month before, the government of Thailand had announced new plans to greatly increase coal use in new electric generation. The Thai government sees a need to diversify energy supply.

A press report on the decision quoted an Asia-based analyst to the point of relying too heavily on imported natural gas.

“There’s really nothing other than coal,” he said.

Coal is a key to energy security for many nations in the world today, including the United States and emerging nations. It also is taking on increased importance in Europe where clean coal technology has become a research priority.

Here in the U.S. at the National Energy Technology Laboratory, in the Office of Fossil Energy, in the Department of Energy we are dedicated to making it possible for the world to rely on its most abundant energy resource and to do so almost without pollution or emissions of the greenhouse gas CO₂.

Carbon capture and sequestration is a centerpiece of the Bush Administration’s energy and climate strategies. So is international cooperation through events such as this and through multi-lateral institutions such as the CSFL itself.

In the last 10 years the U.S. has invested something more than \$340 million in developing the technologies and the knowledge that will enable capture and sequestration.

We want to share what we have learned, and what we intend to learn, with you.

As the International Energy Agency has determined, the future effectiveness of CCS really depends on non-OECD countries.

Let’s take a moment to touch on some the Agency’s other recent findings on carbon capture and storage.

First, CCS can enable significant reductions in CO₂ emissions without stunting economic growth.

Next, CCS can enable cuts in CO₂ at acceptable costs in almost all areas of the world.

Next, CCS will cost less than most other stabilization strategies.

Next, many alternatives to CCS will only slow the growth of emissions.

And, finally, CCS can deliver up to 28% of the reductions needed to return emissions rates to present levels by 2030.

Most of these findings come from a report prepared by IEA for the G8 Group of Nations under the Gleneagles Plan of Action on Climate Change, Energy Security and Sustainable Development.

The G8 goal is cooperation between developed and emerging nations in deploying the actual application of technologies such as more efficient electric generation and carbon capture.

And your nations generally have been involved in the on-going dialogue that is based on the Gleneagles Plan.

Here in the United States, our Carbon Sequestration Program is making significant progress in research and development.

Numerous capture technologies are showing substantial potential for cost reduction. Our intent is to make capture affordable in terms of operating costs and parasitic energy demand.

In storage, our Regional Carbon Sequestration Partnerships have identified 3,400 gigatons of potential storage capacity in 40 states of the United States and four provinces of Canada. They have looked at much of the North American land mass.

At present, the seven partnerships are conducting field validations tests to measure specific types of reservoirs. Testing includes declining oil fields for enhanced recovery coupled with storage; unmineable coal seams for methane production coupled with storage; deep saline reservoirs; and stacked storage involving more than one kind of reservoir.

Soon each partnership will select a reservoir for tests that will involve the injection and monitoring of one million tons of CO₂ each per year.

As we move forward we are gathering the knowledge and the data base that will allow accurate projections of CO₂ underground in all conditions. We will identify and codify best practices. We will seek the depth of understanding that is needed to create and operate a durable and effective framework of law and regulation to support widespread CCS.

Meanwhile, CCS seems to be an idea whose time is coming on in the commercial market.

American Electric Power, one of our major utilities, this spring announced that next year it will begin testing low-cost capture technology from Alstom and actually sequester 100,000 tons a year of CO₂.

If the test is successful, the technology will be scaled up for retrofit for years from now on a 450 megawatt plant in Oklahoma. The resulting 1.5 million tons of CO₂ a year will be sequestered there through enhanced oil recovery.

Capture technologies will be discussed in the conference's opening session tomorrow morning.

So will be some initial deployment plans for industrial-scale CCS and the FutureGen Project, the U.S. initiative whose overseas participants include India.

FutureGen will integrate in one plant for the first time coal gasification, electric generation, hydrogen production, and carbon dioxide capture and storage. A site for the plant will be selected later this year.

And so, I urge you to look closely at the program for the Carbon Sequestration Conference. You will find presentations on all activities pertinent to engaging in carbon capture and storage.

We do lack one thing, however.

We can't offer detailed discussions of assistance and other mechanisms to foster deployment now.

Matters such as the creation and application of incentives and financial support are in other hands. Not the least of those who will be involved are the G8 Nations, a number of multi-lateral agreements, and the United Nations Framework Convention on Climate Change.

More will be heard from all of these institutions, and others, in the next few years as the world moves deeper into the next stage of its mobilization to come to terms with CO₂ and the other greenhouse gases.

What we do offer now – today – is the foundation of knowledge that will enable your nations to take maximum advantage of the opportunities as they are created and offered.

Considered together, your workshop sessions, and the Carbon Sequestration Conference, constitute a body of expert knowledge that is seldom available to anyone in one place at one time. The best from throughout the world are assembled here.

I urge you to take in as much information as possible, beginning today.

And, again, welcome to the United States.

Thank you for your attendance and your attention.