



INTERNATIONAL
TRADE
ADMINISTRATION

Coal News and Trends

September 2008

Upcoming Events:

- **Electra Mining, September 8-12, Johannesburg, South Africa**
Electra Mining Africa is targeted towards equipment producers, traders, service and product suppliers, and representatives from mining and smelting plants. This event serves as the second largest mining show worldwide. Representatives from the International Trade Administration will coordinate pre-arranged meetings between U.S. new-to-market companies and South African companies. Please contact Johan.vanRensburg@mail.doc.gov for additional information.
- **MINExpo International, September 22-24, Las Vegas, NV**
Occurring every four years, the MINExpo event will take place from September 22-24 in Las Vegas and will include educational seminars, mining equipment displays, and optional site visits. The Department of Commerce will coordinate foreign buyer delegations to attend the conference and will arrange for one-on-one meetings between Foreign Commercial Service coal and mining trade specialists and U.S. company representatives to discuss the expansion of business opportunities in a targeted overseas market. These meetings will take place on from 9:00am to 12:00noon on September 23 and September 24 in Room N249 near the International Business Center. To view the listing of targeted overseas markets and to register for the one-on-one meetings, please refer to: <http://www.buyusa.gov/pittsburgh/minexposhowtime.html>
For additional information, please contact Shannon Fraser at Shannon.Fraser@mail.doc.gov, 202-482-3609.
- **International Pittsburgh Coal Conference, September 29-October 2, Pittsburgh, PA**
The Twenty-Fifth Annual International Pittsburgh Coal Conference will focus on environmental emissions issues and technologies surrounding the continued use of coal and the development of future coal-based energy plants to achieve near-zero emissions of pollutants. For additional information on this year's program, please refer to:
<http://www.engr.pitt.edu/pcc/2008%20Conference.htm>
- **International Mining & Machinery Exhibition, November 5-8, Kolkata, India**
The Ninth International Mining and Machinery Exhibition (IMME), organized by the Confederation of Indian Industry (CII) in association with the Ministry of Mines, Ministry of Coal, and Government of India, focuses on the coal and mining opportunities, both internationally and within India. The four-day event will provide U.S. companies with a comprehensive look at export opportunities in India's mining sector. U.S. companies with interests in joint ventures and business-to-business alliances are encouraged to attend the event. For additional information, please refer to <http://www.immeindia.com/> or contact Arup.Mitra@mail.doc.gov.

Upcoming Web-Based Seminars:

➤ **Improving Your Bottom Line with Ethanol** **September 3, 2:00 pm Eastern Time**

On September 3 at 2:00 pm EDT, the Department of Commerce's Office of Energy and Environmental Industries and the Office of Aerospace and Automotive Industries will host a free web-based seminar on 'Improving Your Bottom Line with Ethanol.' This seminar will provide U.S. petroleum retailers with information on 1) the current market for E-85, 2) ethanol conversion logistics, 3) government programs that advance E-85 ethanol distribution, and 4) the opportunities and challenges for U.S. retailers of E-85. The presentations will be led by representatives from the U.S. automotive industry, the ethanol fuel distribution sector, the U.S. Department of Energy, and the gasoline retail sector. For additional information or to register for the event, please contact Shannon.Fraser@mail.doc.gov, 202-482-3609.

Recent Events:

American Exploration and Production Council's Annual Policymakers' Field Trip **August 18-20, 2008, Colorado's Piceance Basin**

The American Exploration and Production Council (AXPC), a national trade association representing 25 of the largest U.S. independent natural gas and oil exploration and production companies, held its annual Policymakers' Fieldtrip to Colorado's Piceance Basin on August 19, 2008. AXPC has conducted this specialized oil and gas field trip for over 12 years, and staff from DOC's Office of Energy and Environmental Industries have taken part in the training session since 2006. The event allows legislative and executive staff-level energy specialists to meet with representatives from the U.S. oil and gas industry and discuss how U.S. energy policy developments impact the competitiveness of U.S. oil and gas companies in domestic and international markets.

The trip focused on the most advanced and environmentally-sound onshore drilling operations and gas processing facilities in the United States. The participants visited two drilling operations and one natural gas processing plant. At these sites, the participants saw rigs that are capable of drilling up to 24 wells from one location by using directional drilling and simultaneous operations. These rigs drill wells while 1) trucks perforate casing, 2) hydraulic fracturing operations prop open underground formations, and 3) gas is sold, all at the same location. This streamlined approach ensures that drilling is conducted in an environmentally-sound method, as there are fewer roads and infrastructure facilities when compared to a standard rig operation facility. The wells are hydraulically fractured from four miles away from the rig operations. Thus, the reduction of the number of truck trips to haul water and transport equipment is additional evidence to an environmentally-friendly oil and gas extraction practice.

Following the drilling rig overviews, the participants visited a natural gas processing plant where they learned about 1) the removal of contaminants from a gas stream, 2) the separation of various types of gases, 3) the process and equipment required to move natural gas to the interstate pipeline system, and 4) the distribution of natural gas to the western part of the United States.

The Annual Policymakers' Field Trip is held in the Colorado region, where the Piceance Basin and Uinta Basin hold an estimated 21 trillion cubic feet of undiscovered natural gas and approximately 60 million barrels of undiscovered oil. The potential opportunities for gas and oil discoveries in the region will enable the United States to secure domestic energy resources, thereby reducing reliance on natural resource energy imports. *Additional information on the American Exploration and Production Council is available at: <http://www.dpcusa.org>.*

Policy Analysis:

DOE Sequestration Atlas Captures Award for Publication Excellence One-of-a-Kind Atlas Supports Carbon Sequestration Initiatives

http://fossil.energy.gov/news/techlines/2008/08034-Sequestration_Atlas_Wins_Award.html

August 14, 2008

Washington, D.C. – The U.S. Department of Energy's *Carbon Sequestration Atlas of the United States and Canada* has captured the Awards for Publication Excellence (APEX) Grand Award. The atlas, an invaluable tool for organizations engaged in carbon sequestration activities, is presently being updated and is expected to be re-released in November 2008.

Communications Concepts Inc., which sponsors the APEX awards, selected the winning entries based on "excellence in graphic design, editorial content, and success of the entry . . . in achieving overall communications excellence and effectiveness." The Grand Awards signify outstanding achievement in communications. After judges received nearly 4,500 entries, only 120 APEX Grand Awards were given in 11 categories.

"We have seen the value that our first carbon sequestration atlas has had in providing sequestration information to local, state, and other government agencies, as well as industry and academia," said Acting Assistant Secretary for Fossil Energy James Slutz. "We are equally proud to learn that our atlas has also been recognized in the field of publication as an outstanding vehicle for communications."

The *Carbon Sequestration Atlas* earned a Grand Award in the category of Non-profit, One-of-a-Kind Publications. The atlas presents the first coordinated assessment of carbon capture and storage potential across the majority of the United States and portions of Western Canada.

DOE's National Energy Technology Laboratory created and jointly developed the atlas with its Regional Carbon Sequestration Partnerships, along with the National Carbon Sequestration Database and Geographical Information System. The atlas provides an overview of carbon dioxide's lifecycle through the entire capture and sequestration process. It also summarizes DOE's sequestration activities, as well as the activities of DOE's Regional Partnerships, and it details the most current and best available estimates of geologic carbon dioxide storage potential.

DOE Seeks Applications for Third Round of Clean Coal Power Initiative Funding Opportunity Announcement Solicits Applications for Carbon Capture and Sequestration

http://fossil.energy.gov/news/techlines/2008/08033-CCPI_Round_3_Begins.html

August 11, 2008

Washington, D.C. – The U.S. Department of Energy (DOE) recently issued the final Funding Opportunity Announcement (FOA) for Round 3 of the Clean Coal Power Initiative (CCPI) which seeks to accelerate the commercial deployment of advanced coal technologies to help supply the United States with clean, abundant, and affordable energy. DOE anticipates making multiple awards under this FOA and, depending on fiscal year 2009 appropriations, may be able to provide up to \$340 million to be distributed among selected recipients. The projects will be cost-shared, with the award recipient(s) providing at least 50 percent of funds for the project. The solicitation contemplates cooperative agreements between the government and industry to demonstrate, at commercial scale, new technologies that capture carbon dioxide (CO₂) emissions from coal-fired power plants and either sequester the CO₂ or put it to beneficial use.

"The Department of Energy is committed to increasing the nation's energy security and addressing global climate change by developing the technologies that will ensure coal can be used to meet our growing energy demand in an environmentally responsible way," Acting Assistant Secretary for

Fossil Energy Jim Slutz said. "This announcement brings clean, coal-derived energy, with no greenhouse gas emissions, one step closer to the commercial market and to the consumer."

The FOA, which is available at www.grants.gov and the DOE e-Center, provides instructions for the preparation and submission of an application and outlines the mission need and background, project description, and the primary technical goals and functional performance requirements. The announcement also outlines the criteria by which applications will be evaluated, the terms and conditions of a model cooperative agreement, and the cost-sharing required for government-industry cooperation. For Round 3, a draft FOA detailing the goals and requirements was released in October 2007 for comment. To garner input, a public workshop was held November 1, 2007, with 105 attendees representing utilities, technology vendors, and project developers. Changes to the final FOA include:

- Carbon capture technologies must operate at 90 percent carbon capture efficiency.
- At least 300,000 tons per year of CO₂ must be captured and sequestered or put to beneficial use.
- Projects must show significant progress toward carbon capture and sequestration with less than 10 percent increase in electricity costs.
- Projects must use domestic mined coal or coal refuse for at least 75 percent of energy input.
- Projects must produce electricity as at least 50 percent of the gross energy output.
- Repayment of the Government's share of project costs is not required.

Applications are due to DOE on January 15, 2009, and selection announcements are anticipated for July 2009.

Initiated in 2002, the CCPI is a multi-year program that demonstrates advanced coal-based power generation technology at commercial scale. Eight projects are currently active from two previous rounds of competition. The goal of the initiative, which is being executed through a series of competitive solicitations, is to accelerate the readiness of advanced coal technologies for commercial deployment, ensuring that the United States has clean, reliable, and affordable electricity and power.

DOE Project Starts CO₂ Sequestration in New Mexico Coalbed Southwest Regional Partner Testing Injection Process, Methane Recovery

http://fossil.energy.gov/news/techlines/2008/08031-San_Juan_Basin_CO2_Injection.html

August 4, 2008

Washington, D.C. – DOE and its Southwest Regional Partnership (SWP) recently began injecting carbon dioxide (CO₂) in a large coalbed while simultaneously recovering valuable natural gas.

The SWP plans to inject up to 35,000 tons of CO₂ in a six-month demonstration at the San Juan Basin near Navajo City, N.M. Unlike other enhanced coalbed methane recovery projects, this demonstration will develop ways to maximize permanent storage of the injected CO₂, a process called geologic carbon sequestration.

Many coalbeds in the United States are saturated with natural gas (methane), but the gas is difficult to produce because methane chemically binds to coal. However, CO₂ shares this same tendency to bind to coal. Injecting CO₂ into the coalbed essentially displaces the methane and makes the gas easier to produce. This process is called enhanced coalbed methane recovery.

The San Juan Basin was selected for the project because it is considered one of the top-ranked basins worldwide for coalbed methane recovery and thus is also a prime candidate for value-added CO₂ sequestration. Its advantages include favorable geology, high methane content, available CO₂ from nearby power plants, low capital and operating costs, and well-developed natural gas and CO₂ pipelines. The San Juan basin contains coals that are exceptionally permeable, at least compared to other regional coalbeds. Due to the tendency of coal to swell when in contact with CO₂, high initial coal permeability is required to maintain effective CO₂ injection rates (high injectivity) over time. DOE has established high injectivity as a sequestration program goal for large-scale, low-cost CO₂ sequestration in coal.

The injection site consists of three coalbed methane-producing wells and a centrally located injection well. The coals, which occur at depths of approximately 3,000 feet, are about 75 feet thick and are split among three seams over a 175-foot interval. This area of the San Juan coalbed fairway had previously undergone significant coalbed methane production.

In addition to the CO₂ injection, the SWP intends to make use of the project's produced water. Coalbed methane production typically results in a great deal of produced water. The SWP plans to take

some of this produced water, desalinate it, and use it to irrigate nearby riparian areas stressed by prolonged drought. Resulting vegetation growth should induce additional CO₂ uptake, another form of carbon sequestration.

DOE's Regional Carbon Sequestration Partnership Program, managed by the Office of Fossil Energy's National Energy Technology Laboratory (NETL), includes seven partnering regions established to determine the best approaches for capturing and permanently storing CO₂, a greenhouse gas that contributes to global climate change. The partnerships are made up of state agencies, universities, private companies, and nonprofit organizations that form the core of a nationwide network helping to establish the most suitable technologies, regulation, and infrastructure needs for carbon sequestration. The partnerships include more than 350 organizations, spanning 42 states, three Indian nations, and four Canadian provinces.

The SWP is led by the New Mexico Institute of Mining and Technology, and includes the states of Colorado, Oklahoma, New Mexico, Utah, and portions of Arizona, Kansas, Texas, and Wyoming. The partnership is currently conducting five field tests—three geologic and two terrestrial—all at various stages of planning and execution. Each is designed to validate the most promising carbon sequestration technologies and infrastructure concepts.