INTERNATIONAL TRADE ADMINISTRATION

Coal News and Trends

January 2009

Upcoming Web-Based Seminars:

- **Clean Coal Technology Webinars for January and February**
  The International Trade Administration will host a series of web-based seminars throughout 2009 highlighting opportunities for U.S. clean coal technology, mining, and coal-fired power generation companies in overseas markets. The seminars will provide country-specific market overviews for U.S. companies interested in establishing or expanding exports in the clean energy sector. The series will be led by U.S. Foreign Commercial Service energy/trade specialists in the targeted market. The dates and times for the January and February webinars are as follows:

  - *Opportunities for U.S. Companies in the Coal and Mining Sectors of India, January 15, 2009*
  - *Opportunities for U.S. Companies in the Coal and Mining Sectors of Canada, January 28, 2009*
  - *Opportunities for U.S. Companies in the Coal and Mining Sectors of Russia and Ukraine, February 11, 2009*
  - *Opportunities for U.S. Companies in the Coal and Mining Sectors of South Africa, February 25, 2009*

  To register for the events or for additional information please refer to: http://www.buyusa.gov/pittsburgh/coalwebinars2009.html, or contact Shannon.Fraser@mail.doc.gov, 202-482-3609, or Steve.Murray@mail.doc.gov, 412-644-2819.

Coal Industry Bid Announcements:

- **Coal Preparation Facility in India**
  The International Competitive Bidding Notice for a 5 million ton per year coal preparation plant to be set up on a build-operate-maintain model has been advertised by Bharat Coking Coal, Ltd. (BCCL), a subsidiary of Coal India, Ltd. The details of the announcement are as follows:

  - The bidder is responsible for the entire project spectrum, to include planning, design and engineering, equipment selection, installation, commissioning, operation, and maintenance for 10 years. BCCL will provide capital funding and related infrastructure such as land, water, and power;
  - Construction is to be completed within 18 months from the contract signing date;
  - **Bids must be submitted to the BCCL office by 1:00 pm on February 5, 2009.** Bids will be opened at 3:30 pm on this date;
  - The link for the bid notice is http://bccl.cmpdi.co.in/tenderdownload/EDP08-12529.pdf;
  - U.S. companies with requests for additional information on this project are encouraged to contact the Commercial Service Trade Specialist in Kolkata, India: Arup.Mitra@mail.doc.gov

Marketing Opportunities for U.S. Companies at Trade Winds Europe, Warsaw, April 20-22, 2009:

U.S. exports are growing four times faster than the economy as a whole, and Europe presents a market filled with opportunities for U.S. businesses. If your company is already doing business in one, two or several European countries, expansion throughout the continent is the next logical step. Poland constitutes a market of 38 million people located in the heart of central Europe, is a fully integrated member of the EU, and aims to increase the utilization of its vast domestic energy resources. By participating in the Trade Winds Europe Forum, U.S. companies have the chance to make or increase sales in this booming region with a customized itinerary, according to country market demand.

U.S. companies interested in becoming a marketing partner will receive exceptional visibility and services prior to and during the event. Companies registered as marketing partners will receive: 1) company advertisements in Commercial News USA; 2) pre-event promotion and recruitment; 3) recognition as a prominent marketing partner at the Opening Ceremony and all networking events; 4) integration of partner logo and website on all conference promotions and materials; 5) registration for company representative(s) to attend the event; 6) pre-arranged meetings with Senior Commercial Officers from 28 countries in Europe; and 7) partner promotion advertisements on U.S. Commercial Service Business Service Provider Website throughout the Mid-Atlantic Network and Poland.

For additional information on the Trade Winds Europe Forum, please refer to:
http://www.buyusa.gov/newhampshire/twe.html

U.S. companies interested in becoming a Trade Winds Marketing Partner are encouraged to contact Michael Manning at 856-722-0958 or Michael.Manning@mail.doc.gov

Policy Analysis:

Multi-Pollutant Control System for Small Coal-Based Power Plants Meets, Exceeds Goals

New Retrofit Technology Achieves 98 Percent Mercury Removal, Reduces Capital Costs by 40 Percent

http://fossil.energy.gov/news/techlines/2008/08062-Greenidge_Meets_Goals.html

Washington, D.C. – A U.S. Department of Energy project has successfully demonstrated the cost-effective removal of multiple pollutants from the emissions of an older 100-megawatt coal-fired power plant at AES Greenidge's facilities in Dresden, New York. The successful retrofit means the unit can meet increasingly stringent emissions regulations while continuing operations another 20–30 years.

In addition, wide commercial acceptance of the new system could contribute to significant reductions in national emissions and help extend the life of more than 400 power plants with capacities of 50–300 megawatts, enabling them to continue to produce reliable electricity. These smaller existing units are a valuable part of the Nation's energy infrastructure, constituting almost 60 gigawatts, which is roughly 20 percent of the country's coal-based capacity. Continued operation of such plants would enable utilities and ratepayers to avoid the higher costs of building new plants to replace them.

The goal of the Greenidge Multi-Pollutant Control Project was to show that the multi-pollutant control system could substantially reduce emissions of nitrogen oxides, sulfur dioxide, sulfur trioxide, hydrochloric acid, and mercury, while affording lower capital and maintenance costs and smaller space requirements than leading conventional technologies. The project succeeded in all respects. It began startup and testing in early 2007 and concluded in October 2008.

Many smaller coal-fired units such as AES Greenidge Unit 4 do not have sufficient land area to install conventional pollution control equipment. These units are also penalized by economies of scale, making it difficult to justify the large capital investment required to retrofit them with technologies such as selective catalytic reduction (SCR) and wet flue gas desulfurization (FGD).

The new system required only 0.4 acres of land, significantly less than would have been required for these conventional systems. Moreover, it had a total plant cost roughly 40 percent less than the estimated cost to retrofit the same unit with conventional SCR and wet FGD.

Greenidge's 107-megawatt, 1953-vintage Unit 4 is a tangentially-fired boiler that primarily burns eastern bituminous coal. The unit's new multi-pollutant control equipment includes: 1) a hybrid SCNR/SCR (selective noncatalytic reduction/selective catalytic reduction) system for nitrogen oxide control; and, 2) a circulating fluidized bed dry-scrubbing system for control of sulfur dioxide, mercury, acid gas, and particulate matter. An activated carbon injection system was also installed, but it proved unnecessary to meet the project's mercury removal goal.

Operating data collected through June 2008 revealed average pollutant reductions of 96 percent for sulfur dioxide, 95 percent for sulfur trioxide, 97 percent for hydrochloric acid, and 98 percent for mercury—all of which meet or exceed target values. In addition, the nitrogen oxides emission rate goal of less than or equal to 0.1 pounds per million British thermal units was demonstrated during short-term testing. Although not an original project goal, the system reduced emissions of particulate matter by more than 98 percent relative to the emission rate achieved by the unit's particulate control equipment prior to the project.

A part of the Energy Department's Power Plant Improvement Initiative, the project was conducted by CONSOL Energy Inc., AES Greenidge LLC, and Babcock Power Environmental Inc. The Office of Fossil Energy's National Energy Technology Laboratory was responsible for project oversight through a financial assistance cooperative agreement with CONSOL.

Clean Coal Power Initiative Project Ends in Success

Optimization Software Demonstration Project Improves Emissions, Efficiency, Cost, and Availability at Coal-Fired Power Plant

http://fossil.energy.gov/news/techlines/2008/08063-Neuco_Project_Completed.html

Washington, D.C. – A project selected in 2003 under the initial round of the U.S. Department of Energy's Clean Coal Power Initiative (CCPI) has drawn to a successful close, having met all of its performance and cost goals. The optimization software development and demonstration project reduced emissions, increased efficiency, lowered costs, and improved reliability at an 1,800-megawatt coal-fired power plant. The project's success will help maintain America's plentiful coal resources as a cornerstone of the country's energy portfolio.

"The successful conclusion of this CCPI project is a milestone on the road to cleaner power systems using coal," said acting Assistant Secretary for Fossil Energy Jim Slutz. "It illustrates anew that this abundant resource can be used to secure a reliable supply of electricity without sacrificing the Nation's economy or environment."

NeuCo Inc. (Boston, Mass.) and Dynegy Inc. (Houston, Texas) conducted the 4-year project, which was sponsored by the Office of Fossil Energy and managed by the National Energy Technology Laboratory.

During the first phase of the project, NeuCo developed a suite of integrated online optimization systems that were then installed and integrated with plant operations at Dynegy Midwest Generation's Baldwin Energy Complex, a series of three 600-megawatt coal-fired units located in Baldwin, Ill. The software products were developed to optimize the combustion and soot blowing processes, reduce the ammonia consumed by selective catalytic reduction systems, and improve unit thermal performance and plant-wide availability.

The second phase of the project focused on improving the products and quantifying the benefits of the integrated system. The results are as follows:

- Nitrogen oxide emissions dropped by 12–14 percent.
- Fuel efficiency improved 0.7 percent.
- Available megawatt hours increased by 1.5 percent.
- Ammonia consumption was reduced by 15–20 percent.
- Reductions in greenhouse gases, mercury, and particulates—as well as lower costs, improved reliability, and greater commercial availability—also resulted.

The project has yielded a cost-effective tool to improve the environmental footprint of coal-based power generation and will help to ensure that the United States has clean, reliable, and affordable

electricity well into the future. According to the project's final report, "The suite of four integrated optimizers commercialized as part of this project is expected to yield well under a one-year payback for average-sized units across all unit types and fuel categories comprising the U.S. fossil power industry."

The products that were installed, refined, and demonstrated during the project are expected to provide annual savings to the Baldwin Energy Complex ranging from $7.2 million to $8.1 million dollars plant-wide. The benefits available to the industry are estimated at $2.3 to $2.6 billion dollars per year.