



COALBED METHANE EXTRA

A publication of the Coalbed Methane Outreach Program (CMOP)

www.epa.gov/coalbed



Methane to Markets Expo in Beijing: A Resounding Success

The Methane to Markets (M2M) Partnership Expo was held in Beijing, China, from 30 October to 1 November. The event was hosted by China's National Development and Reform Commission (NDRC) and the U.S. Environmental Protection Agency (EPA). Over 700 participants from 34 countries were in attendance, and 91 methane capture and use opportunities were featured in the "Methane Capture Marketplace". If implemented, it is estimated that these projects would yield annual methane emission reductions equivalent to 11.5 million metric tons of carbon dioxide equivalent (MMTCO₂E) by 2015. Dozens of companies contributed their resources as sponsors to facilitate this monumental event.



Minister Xie Zhenhua, Vice Chairman of China's NDRC, speaks at the Expo plenary session

see M2M UPDATE, page 2

In this issue...

- 1 *Methane to Markets Expo in Beijing: A Resounding Success*
- 1 *Announcement: U.S. EPA Issues Request for Proposals*
- 3 *U.S. Coal Production Increases in the Third Quarter*
- 4 *CBM/CMM News*
- 6 *Announcements*
- 8 *Upcoming Events*

Access documents electronically from the "Documents, Tools, and Resources" pages on our Web site at www.epa.gov/coalbed

To subscribe to *CBM Extra* and *CBM Notes*, please go to our website <http://www.epa.gov/coalbed/join/index.html> and register for our mailing list. You will be added within two weeks.

Announcement: U.S. EPA Issues Request for Proposals

U.S. Environmental Protection Agency (EPA) issued a major request for proposals (RFP) to support the Methane to Markets Partnership by funding projects and activities that advance methane recovery and use as a clean energy source.

The total estimated amount for this competitive funding opportunity is up to \$7 million. EPA expects to award up to 40 cooperative agreements through this announcement, ranging in value from approximately \$100,000 to \$700,000.

EPA seeks proposals from organizations including international governments, not-for-profit organizations, states, local governments, and universities. Successful proposals will promote project development internationally. The estimated project period for awards is September 2008 through September 2011.

Proposals are due by 22 February 2008, 4:00 p.m. EST. All proposals, however transmitted, must be received by EPA or through grants.gov (RFP number EPA-OAR-CCD-08-01) by the closing date and time to receive consideration. Please visit EPA's Methane to Markets Grants page <http://www.epa.gov/methanetomarkets/grants.htm> to download the RFP and for additional information on how to apply.



Methane to Markets

M2M Update *from page 1*

- Expo proceedings are now available on the M2M web-site at <http://www.methanetomarkets.org/expo/proceedings.htm>
- You can read more about the outcomes of the Expo - including new funding, partnerships, and projects announced - in the Methane to Markets Quarterly Newsletter Special Edition, available on the web at http://www.methanetomarkets.org/resources/general/docs/mi_no9_110607.pdf
- For official press releases and Expo media coverage from around the world, please visit http://www.methanetomarkets.org/resources/news/expo_updates.htm
- Project opportunities in all 4 sectors (posters and flyers) are available at <http://www.methanetomarkets.org/events/2007/all/expoprojects.htm>

As part of the M2M Partnership Expo, the Asian Development Bank (ADB) hosted a Carbon Market Initiative (CMI) side event. The CMI aims to provide upfront co-financing, technical support, and marketing support for clean energy projects eligible for the Clean Development Mechanism. To read the opening remarks from this event, please visit <http://www.adb.org/Documents/Speeches/2007/sp2007051.asp>
For additional information, see <http://www.adb.org/clean-energy/cmi.asp>

Coal Subcommittee Holds Meeting in Beijing

The Coal Subcommittee held its seventh session on 1 November 2007 in Beijing, China, on the final day of the Methane to Markets Partnership Expo. The meeting focused on Partner countries' coal mine methane (CMM) related activities, Partner countries' and Project Network members' experiences at the Expo, and a discussion regarding post-Expo activities.

The Partnership Steering Committee tasked each Subcommittee to focus on country-specific project implementation to address each country's project development barriers.



To implement this request, the Subcommittee will convene a task force and will work with the United Nations Economic Commission for Europe (UNECE) to develop a template for country-specific strategic action plans to overcome barriers to project development.

Based on the generous suggestion from the Italian delegation, the next Coal Mine Subcommittee meeting is tentatively planned for 29-30 April 2008, in Cagliari, Sardinia, Italy. More specific details will be forthcoming.

The Subcommittee meeting was well attended, with more than 45 Subcommittee Members and Project Network members participating. The Subcommittee meeting minutes are now available on the Methane to Markets Web site at http://www.methanetomarkets.org/resources/coalmines/docs/draft_cmm_expo_subcomm_min_112607.pdf

The European Commission Becomes the 21st Methane to Markets Partner

The European Commission (EC) became the 21st Methane to Markets Partner in September 2007. The EC is

see M2M UPDATE, page 3



Visit USEPA's Coalbed Methane Outreach Program New Website!

The U.S. Environmental Protection Agency's Coalbed Methane Outreach Program (CMOP) has recently updated and renovated its website to provide more streamlined access to information about coal mine methane recovery projects and opportunities.

Visit us at <http://www.epa.gov/cmop/>

We hope you find our improved website to be helpful. Don't forget to bookmark it for future reference!

M2M Update from page 2

the first multi-country entity to join on as a Methane to Markets Partner. Four EC member countries (Germany, Italy, Poland, and the United Kingdom) are already members of the Methane to Markets Partnership. The addition of the EC will provide further expertise and resources to advance methane capture and use in Europe and other Methane to Markets Partner countries. Read EPA's press release at

<http://yosemite.epa.gov/opa/admpress.nsf/eebfaebc1af-d883d85257355005afd19/416074351d70350c85257360004b6bc8!OpenDocument>

U.S. Coal Production Increases in the Third Quarter

U.S. coal production for the third quarter of 2007 increased by 1.2% over the second quarter, to 288 million short tons (MMtons), according to the U.S. Energy Information Administration (EIA).¹ However, third quarter coal production was down by 0.6% compared to the third quarter of 2006. Total U.S. production for the first three quarters of 2007 also declined compared to 2006, from 873 MMtons last year to 860 MMtons this year, a reduction of 1.5%.

On a regional level, declining production from the Appalachian region has been a noticeable recent trend (see Figure 1); production during the first three quarters of 2007 was down by 3% compared to the same period of 2006.² The main factors contributing to the decreasing production in the Appalachian region are permitting difficulties associated with new mountaintop removal mining operations,³ and new mining safety regulations that have added an estimated \$2 to \$4 per ton in terms of lost productivity.⁴ Coal production from the Western region, which makes up over half of U.S. domestic supply, also declined by 1%

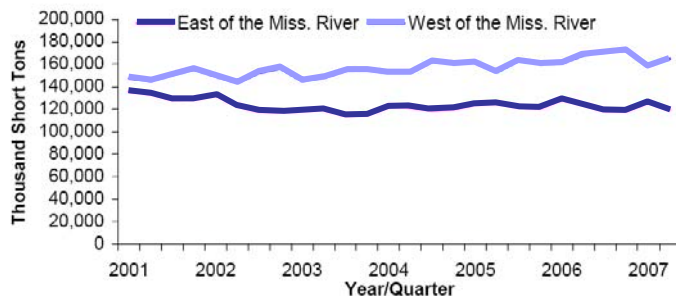


Figure 1. U.S. Coal Production

SOURCE: EIA (2007). Quarterly Coal Report April - June 2007.

over the first three quarters of 2007. Over the same period, production in the Interior region stayed nearly constant.

In terms of other key market indicators, coal prices fluctuated mildly while exports increased in the third quarter of 2007.⁵ Recently, as seen in Figure 2, spot prices in Central and Northern Appalachia have spiked, indicating that the upward trending coal prices seen in the third quarter may continue into the fourth quarter of 2007 and beyond. The increase in eastern coal prices has been driven by production challenges and the mine permitting difficulties in the region. Rising prices in other regions have lagged the east. Traditionally, when market prices in the Appalachians increase, buyers in the Eastern U.S. move

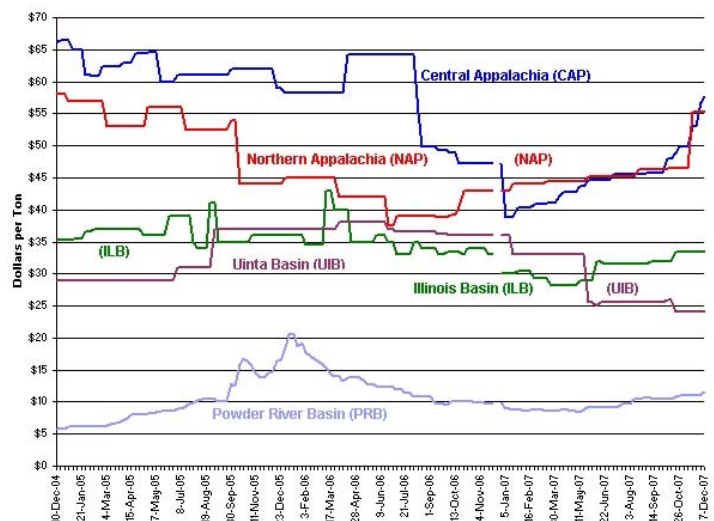


Figure 2. Average Weekly Coal Commodity Spot Prices

SOURCE: <http://www.eia.doe.gov/cneatl/coal/page/coalnews/coalmar.html#spot>

CBM/CMM News

CHINA: Government orders mines shut after 105 confirmed dead in coal mine gas blast

According to the Xinhua News Agency, the State Administration of Worker Safety has ordered the shut-down of all illegally-operated coal mines in northern Shanxi province and 661 non-coal mines in Heilongjiang province after a blast killed 105 people. The gas explosion occurred at 11:15 p.m. Wednesday, December 5, at Xinyao Coal Mine in Hongtong County, Linfen City. 128 miners were working in the shaft, far more than the maximum of 60 miners for one shift as approved by Shanxi coal mine authorities. Police have so far detained 35 people who are alleged to be relevant to or responsible for the fatal gas explosion. Meng Xuenong, acting governor of Shanxi Province, said Shanxi

should draw lessons from the accident and improve worker safety, especially in coal mines.

Xinhua, 9 December 2007 – http://news.xinhuanet.com/english/2007-12/09/content_7220103.htm

Reuters, 10 December 2007 – <http://www.washingtonpost.com/wp-dyn/content/article/2007/12/10/AR2007121000331.html>

UKRAINE: President calls for closure of deadly coal mine

Ukrainian President Viktor Yushchenko demanded the closure of the Zasyadko coal mine in eastern

Ukraine after three successive blasts in two weeks.¹ Acting Prime Minister Victor Yanukovych warned that the mine's closure would have severe consequences for Ukraine's steel industry, a major consumer of coking coal.

According to BBC News, five workers were killed and 66 injured December 3 in a blast at the mine, which lies in Donetsk, about 640 kilometers southeast of the capital Kiev. It was the third accident in two weeks at the same section of the Zasyadko

42 mines out of 160 have systems of degasification, and only 11 mines utilize recovered methane in their boilers.

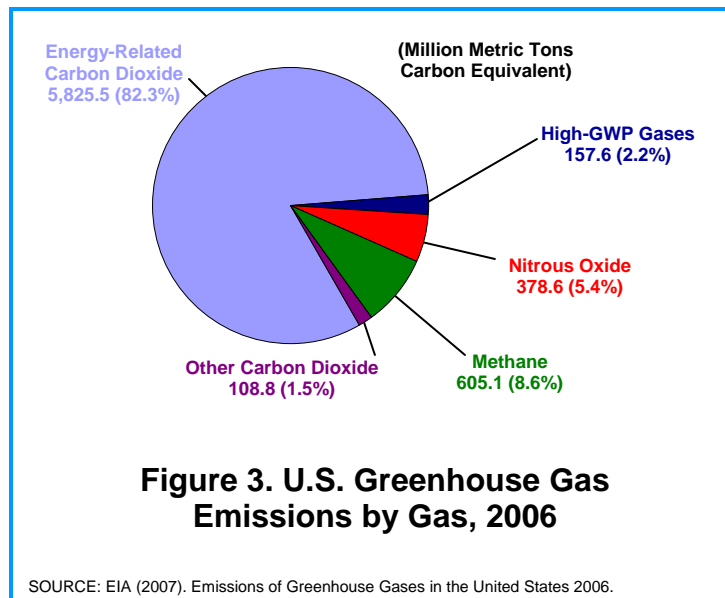
BBC News, 3 December 2007 - <http://news.bbc.co.uk/2/hi/europe/7125145.stm>

U.S.: Greenhouse Gas Emissions Fell in 2006

According to a new report by the Energy Information Administration (EIA), total U.S. greenhouse gas (GHG) emissions in 2006 were down 1.5 percent from the 2005 level of 7,075.6 million metric tons carbon dioxide equivalent (MMTCO₂E). Since 1990, U.S. GHG emissions have grown at an average annual rate of 0.9 percent. U.S. GHG emissions per unit of Gross Domestic Product (GDP), or "U.S. GHG-intensity," fell from 653 metric tons per million 2000 constant dollars of GDP (MTCO₂E/\$Million GDP) in 2005 to 625 MTCO₂E /\$Million GDP in 2006, a decline of 4.2 percent. Since 1990, the annual average decline in GHG-intensity has been 2.0 percent.

As seen in Figure 3, total estimated U.S. GHG emissions in 2006 consisted of carbon dioxide, methane, nitrous oxide, and high global warming potential synthetic gases including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆). Overall U.S. anthropogenic methane emissions decreased by 0.4 percent in 2006, while methane emissions from underground coal mining were down by 3.1 percent from 2005 levels.

The full report can be found on EIA's web site at <http://>



mine. An explosion on November 18 killed 101 miners, while a methane blast on December 1 left 52 miners hospitalized. The Zasyadko mine, one of Ukraine's largest, produces up to 10,000 tonnes of coal every day. Deadly accidents have been a frequent occurrence in recent years. A gas leak at the mine in September 2006 killed 13 miners; a blast in 2001 killed 55; and in 1999, an explosion claimed 50 lives.

Almost 90% of all mines in Ukraine are considered to be unsafe and prone to explosions. At the same time, only 4% of coal bed methane is recovered and utilized. Today only



www.eia.doe.gov/oiaf/1605/ggrpt/index.html

CHINA: New Coal Mine Methane-Fired Power Plant In Northern China

Four of GE Energy's Jenbacher coal mine methane gas engines are generating electricity at a power plant in Shentangzui, Shanxi Province in northern China, owned by Shanxi Yang Quan Coal Industry (Group) Co. Ltd. The power generated (12 MW total capacity) will be sold to the regional grid, providing electricity to an estimated 97,000 Chinese homes.

Most Chinese coal mine methane (CMM) power plants are built at the mine site. However, in this new project, the methane is extracted from an active coal mine and then delivered via pumps, storage tanks, and pipelines over a distance of several kilometers to the Shentangzui Power Plant in the city of Yang Quan in Shanxi Province, one of the leading coal producing regions in China. Site installation was completed in May 2007, and start up and commissioning were conducted in August 2007.

Press Release, 30 October 2007 - http://www.gepower.com/about/press/en/2007_press/103007.htm

INDONESIA: Nation seeks investors for coalbed methane sector

Indonesia will offer investors a 45 percent production split for coalbed methane contracts in an effort to attract funds into the sector, said mines and energy minister Purnomo Yusgiantoro.

The country has encouraged domestic industries and power plants to use alternatives to oil, such as coal and natural gas. Indonesia has CBM resources of about 450 trillion cubic feet, mostly located in South Sumatra. Last year, Indonesian gas dis-

tributor PT Perusahaan Gas Negara said it plans to prospect for coalbed methane in South Sumatra to secure future gas sources.

Reuters, 6 November 2007 - <http://uk.reuters.com/article/oilRpt/idUKJAK26450720071106>

CANADA: Nova Scotia approves coal-bed methane project

A Calgary, Canada, company has obtained a 10-year deal to extract natural gas from the coal fields underneath Springhill, the first development deal of its kind in Nova Scotia. The production agreement with the province gives Stealth Ventures Ltd. the right to commercially develop methane from the Cumberland Basin coal seam. Stealth has drilled three exploratory wells in the Cumberland Basin and plans to hydrofracture the wells to release methane. The company has committed to spending \$2 million in 2008; if the test results are positive, Stealth plans to spend four years in full production. Coalbed methane has never been commercially developed in Atlantic Canada.

CBC News, 7 November 2007 - <http://www.cbc.ca/canada/nova-scotia/story/2007/11/07/stealth-gas.html>

U.S.: CONSOL to temporarily seal Buchanan Mine

Consol Energy Inc. (Pittsburgh, PA) announced it will temporarily seal the Buchanan Coal Mine in Virginia as a final safety step to resuming operations that have been idled for more than four months after roof collapses. The company has been working with the federal Mine Safety and Health Administration to ensure dangerous gases are no longer present before miners return. Engineers expect reentry into the Buchanan Mine in early January.

Production at Buchanan Mine was suspended on July 9, after several roof falls in previously mined areas damaged some of the ventilation controls inside the mine, requiring a general evacuation of the mine. No workers were injured. Before its closure, the Buchanan mine produced approximately 400,000 tons per month of metallurgical coal for use in steelmaking. Consol's total production is around 70 million tons of coal per year from 20 mines, mostly in central and northern Appalachia.

Reuters, 27 November 2007 - http://today.reuters.com/news/articleinvesting.aspx?type=bondsNews&storyID=2007-11-27T172237Z_01_N27484038_RTRIDST_0_CONSOL-MINECLOSURE-UPDATE-1.XML

UNITED KINGDOM: Power station seeks to extract methane and store carbon emissions

Scottish Power has announced plans to sequester carbon and extract methane from beneath one of its coal-fired power stations, according to BBC News. The company has applied for a permit for the pilot project at Longannet power station. The plan calls for depositing carbon in a coal seam, that once hosted a deep mine which flooded in 2004, making the coal inaccessible to mining. Injecting the carbon dioxide releases coal seam methane that would then be used to generate power.

This proposal would be the first project of its kind in the UK; a similar scheme has been tested in Australia. While the plant would only generate a small amount of electricity, the carbon sequestration would reduce Scottish Power's emissions.

see CBM/CMM NEWS, page 7

USEPA Funds CMM Feasibility Studies in China

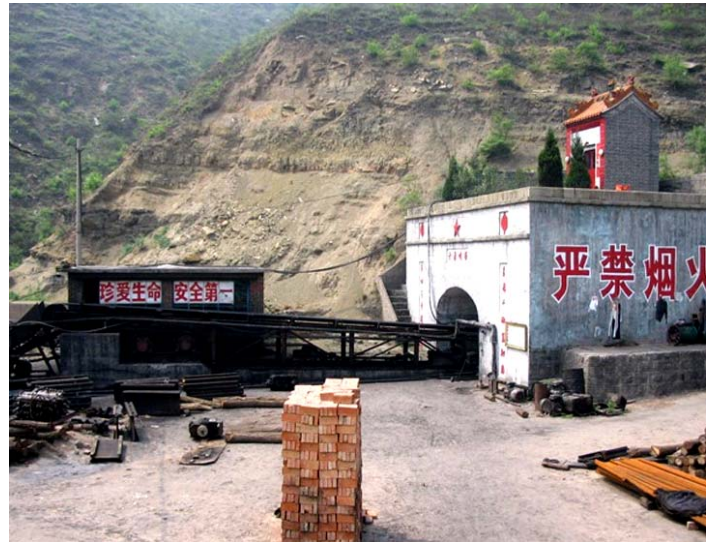
As part of its cooperative efforts with China under the Methane to Markets (M2M) Partnership, the United States Environmental Protection Agency (USEPA) has committed resources to develop two feasibility studies to conduct in-depth technical and economic evaluations of recovery and use of coal mine methane at Chinese underground coal mines. The studies, funded and directed by the USEPA, constitute an important collaborative effort under the US-China Strategic Economic Dialogue (SED).

China is the world's largest coal producer and the leading emitter of coal mine methane emissions. The anticipated outcomes of this project include environmental, economic, and social benefits, all of which further the goals of the M2M Partnership. The studies will involve selection of an appropriate mine, analysis of methane resource data, market assessment for the produced methane, evaluation of degasification

and methane utilization technologies, technical analysis with preliminary engineering design work, estimates of project capital and operating costs, and a full economic and financial analysis with cash flow projections.

One project is a flagship project under the Asia Pacific Partnership on Clean Development and Climate (AP6), and will be performed by Advanced Resources International (ARI), a US-based firm. The specific mine site has not yet been selected. The official M2M press release for this project can be downloaded at http://www.epa.gov/cmop/docs/cmm_us_china_flyer.pdf. The second study will be performed by Raven Ridge Resources of Grand Junction, Colorado. The mine site has not been officially announced.

USEPA plans to support additional feasibility studies in China as part of its ongoing support for the Methane to Markets Partnership and the Strategic Economic Dialogue.



Announcements

First Annual U.S. Coal Mine Methane Conference a Success

The 1st annual U.S. Coal Mine Methane Conference was held 25-27 September in St. Louis, Missouri. Over 80 participants from the coal industry, technology and project developers, and carbon funds attended the conference hosted by EPA's Coalbed Methane Outreach Program (CMOP). The keynote speaker (Dina Kruger, Director of EPA's Climate Change Division) kicked off the event by discussing U.S. Climate Policy Developments. The conference covered the technical, legal, regulatory, policy, and finance issues surrounding coal mine methane (CMM) project development in the United States. Innovative technologies (including ventilation air methane) and case studies of successful CMM projects in the U.S. and overseas were presented. The highly successful conference culminated

in a field trip to CMM projects at two abandoned mines in Southern Illinois. Conference proceedings have been posted on the CMOP website http://www.epa.gov/cmop/conf/cmm_conference_sep07.htm

First Announcement: Polish Workshop on Coal Mine Methane Recovery and Utilization


In conjunction with the International Mining Forum, there will be a workshop on "New Trends in Coal Mine Methane (CMM) Recovery and Utilization" in Szczyrk, Poland from 27-28 February 2008 with field trips on 29 February and 1 March. The workshop is being organized by the Central Mining Institute of Poland, the Polish Academy of Sciences, and AGH University of Science & Technology, with support from the UN Economic

see ANNOUNCEMENTS, page 7



Coal Production from page 3

into western U.S. markets, impacting the supply dynamics of these markets, and generally leading to higher prices in western basins.

Largely due to growing demand in Eastern Europe and Asia (especially China), the global market for both steam and metallurgical coal is tightening causing many western producers to become exporters. According to the EIA, U.S. coal exports for the third quarter increased 10% over the second quarter to 16.2 MMtons. In the third quarter of 2007, the U.S. exported 5.6% of the coal it produced. Since 2001, U.S. quarterly coal exports as a percentage of total production has surpassed 5% only three times before. 

¹ EIA (2007). Monthly Energy Review November 2007.


² EIA (2007). Weekly and Monthly U.S. Coal Production Overview - http://www.eia.doe.gov/cneaf/coal/weekly/weekly_html/wcpseptember2007.html

³ EIA (2007). Quarterly Coal Report April-June 2007.

⁴ SNL Energy (2007). Coal Report. Vol. 3, Issue 47, Monday, December 3, 2007.

⁵ EIA (2007). Coal News and Markets - <http://www.eia.doe.gov/cneaf/coal/page/coalnews/coalmar.html>

CBM/CMM News from page 5

BBC NEWS, 6 December 2007 - http://news.bbc.co.uk/2/hi/uk_news/scotland/edinburgh_and_east/7130493.stm 

¹ Xinhua, 3 December 2007 - http://news.xinhuanet.com/english/2007-12/03/content_7194225.htm


Announcements from page 6

Commission for Europe, the U.S. Environmental Protection Agency and the Methane to Markets Partnership.

The workshop will cover a range of technical and financial issues as well as cutting edge end use options. The workshop is planning to have interpretation in English, Polish, and Russian. A cost-recovery registration fee is being charged by the organizers. Additional information, including a detailed agenda, will be forthcoming very soon. For more details see the Upcoming Events section of this newsletter.

New Publication: United Nations Economic Commission for Europe. Emerging Global Energy Security Risks. No. 36. 2007.

This publication is the result of the analyses and discussions conducted by the Energy Security Forum on the global dimensions of emerging energy security risks facing UNECE member States. It presents global energy security risks from three different points of view: the European Union, the Russian Federation, and from North America. It also examines how the Caspian Sea region can contribute to energy supply diversification. It reviews the energy transport corridors, new infrastructure, transmissions systems, and investment requirements needed to accomplish this.

To purchase this publication please visit <https://unp.un.org/bookshop/details.aspx?sku=9211169755> 

CMOP Contacts

Address inquiries about the *Coalbed Methane Extra* or about the USEPA Coalbed Methane Outreach Program to:

Pamela Franklin

Phone: 202-343-9476

E-mail: franklin.pamela@epa.gov

Barbora Jemelkova

Phone: 202-343-9899

E-mail: jemelkova.barbora@epa.gov

Jayne Somers

Phone: 202-343-9896

E-mail: somers.jayne@epa.gov

Our mailing address is:

US Environmental Protection Agency
Coalbed Methane Outreach Program, 6207J
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Visit our Web site at:

www.epa.gov/coalbed
www.methanetomarkets.org

What do you want to know about?

If you have suggestions or requests for future CBM Extra content, please drop us a line.

Jemelkova.Barbora@epa.gov or Somers.Jayne@epa.gov



Upcoming CBM/CMM Events

Global Coal Methane Energy Summit

28 – 29 January 2008
Swissôtel Merchant Court, Singapore
Contact: Sasha
Email: sasha@cmtsp.com.sg
Website: <http://www.cmtevents.com/eventschedule.aspx?id=451&ev=080111>

Stimtech 2008

1 – 2 February 2008
Hotel Taj Lands End
Mumbai, India
Registration closes 15 January 2008
Contact: Pradip Kumar
Phone: +91 22 27486121
Email: stimtech2008@ongc.co.in
Website: <http://www.stimtech2008.co.in/>

Mining Matters - 110th Annual National Western Mining Conference & Exhibition

12 – 14 February 2008
Westin Tabor Center
Denver, Colorado, USA
Phone: 303-575-9199
Email: jcolgan@coloradomining.org
Website: http://www.coloradomining.org/nu_conferences.php

Carbon Forum America

26 – 27 February 2008
Moscone Convention Center
San Francisco, California, USA
Website: <http://www.carbonforumamerica.com/>

New Trends in Coal Mine Methane (CMM) Recovery and Utilization – Workshop

In conjunction with the International Mining Forum
27 – 28 February 2008
Szczyrk, Poland
Contact: Lucyna Szoltysek
Phone: (+48) 32-259 26 23
Email: l.szoltysek@gig.katowic.pl
Website: <http://www.imf.net.pl/>

9th Annual Coalbed Methane Conference

10 – 11 March 2008
JW Marriott Hotel at Cherry Creek
Denver, Colorado, USA
Contact: Sylvester Giustino
Phone: 212-967-0095 ext. 203
Email: sgiustino@srinstitute.com
Website: http://www.almevents.com/conf_page.cfm?instance_id=30&web_id=1076&pid=685

2008 AAPG Annual Convention

20 – 23 April 2008
San Antonio, Texas, USA
Program themes include Hydrocarbons from Shale & Coal
Website: <http://www.aapg.org/sanantonio/>

TENTATIVE: Methane to Markets Partnership Coal Subcommittee Meeting

29 – 30 April 2008
Cagliari, Sardinia, Italy
Website: <http://www.methanetomarkets.org/> (details to be forthcoming)

Carbon Expo

7 – 9 May 2008
Cologne, Germany
Website: <http://www.carbonexpo.com/>

2008 International Coalbed Methane Symposium

19 – 23 May 2008
Bryant Conference Center, Tuscaloosa, Alabama, USA
Website: <http://www.coalbed.ua.edu>

12th US / North American Mine Ventilation Symposium

9 – 11 June 2008
John Ascuaga's Nugget Casino Resort
Reno, Nevada
Contact: Dr. Pierre Mousset-Jones
Phone: 775-784-6959
Email: mousset@unr.edu
Website: <http://www.unr.edu/ventsymp2008/>

7th European Coal Conference

26 – 29 August 2008
Lviv, Ukraine
Dr. Andriy Poberezhskyy
Phone: (0322) 635-047
Email: igggk@mail.lviv.ua
Website: <http://www.iggcm.org.ua>

MINExpo International 2008

22 – 24 September 2008
Las Vegas Convention Center
Las Vegas, Nevada, USA
Phone: 630-434-7779
Email: minexpo@heixpo.com
Website: <http://www.minexpo.com>

If you don't receive our weekly email updates, *CBM Notes*, go to
www.epa.gov/coalbed/join/index.html to sign-up now!