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CoalLeader

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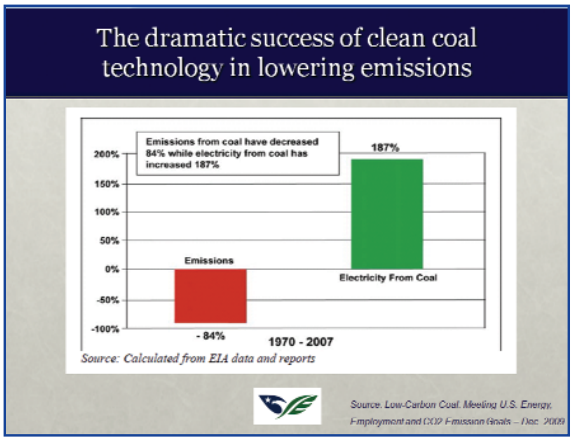
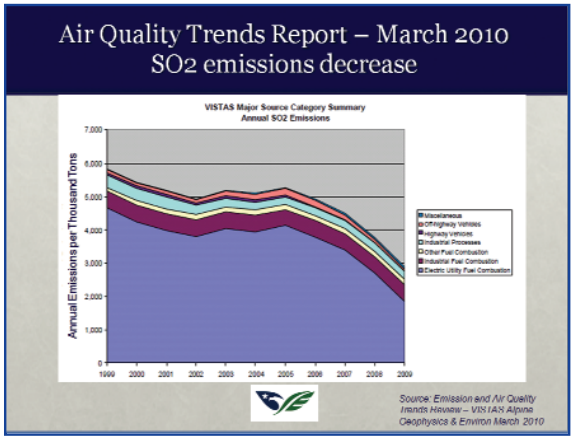
Coal Energizes America

Kenneth Nemeth, Executive Director of Southern States Energy Board recently talked about the importance of coal to the American Energy needs and the American economy. Nemeth said the most critical issues facing the United States today are the availability, reliability, cost and environmental impact of energy resources. A strong and viable strategic energy policy is critical to sustaining robust economic growth to enhance the quality of life for future generations. For fifty years, the Southern States Energy Board has been the regional forum where government and industry leaders collaborate and cooperate to design policy and technology solutions that will shape the nation's prosperity and security in a global economy.

Kenneth Nemeth





Clean coal technology describes a new generation of energy processes that sharply reduce air emissions and other pollutants from coal-burning power plants, and these technologies are working. Air quality trends report NOx and SO2 emissions have decreased. Emissions from coal have decreased 84 percent while

Nemeth Cont Page 16

Department of Energy Announces 15 Projects Aimed at Secure Underground Storage of CO2

U.S. Energy Secretary Steven Chu announced recently the selection of 15 projects to develop technologies aimed at safely and economically storing carbon dioxide (CO2) in geologic formations. Funded at $21.3 million over three years, today's selections will complement existing DOE initiatives to help develop the technology and infrastructure to implement large-scale CO2 storage in different geologic formations across the Nation. The projects selected today will support the goals of helping reduce U.S. greenhouse gas emissions, developing and deploying near-zero-emission coal technologies, and making the U.S. a leader in mitigating climate change.

"The projects announced today are part of this Administration's commitment to leading the world in carbon capture and storage technology," said Secretary Chu. "These projects will reduce greenhouse gas emissions, develop clean energy innovation and help produce jobs for Americans across the Nation."

Steven Chu

Efforts are underway to demonstrate safety and permanence of geologic sequestration through initiatives such as DOE's Regional Carbon Sequestration Partnerships program. The 15 selected projects will complement ongoing efforts by developing and testing technologies that address critical challenges for geologic storage including injectivity of CO2 into the reservoir, storage capacity, plume migration, and containment by caprock and other trapping mechanisms.

Geologic storage is currently focused on five types of formations: depleted oil and gas reservoirs; deep saline formations; unmineable coal seams; oil- and gas-

DOE Cont Page 19

Alpha Natural Resources and Massey Energy Agree to $8.5 Billion Combination

Alpha Natural Resources, Inc. and Massey Energy Company announcedrecently that they signed a definitive agreement under which Alpha will acquire all outstanding shares of Massey common stock, subject to customary closing conditions including stockholder approval of both companies. **Read more on Page 13.**

Coal Leader
GUEST Editoral

American Arrogance

By: Glenn Beck

If you're a poor sap who needs to eat or drive in the near future, then you might want to consider taking out a second mortgage (assuming you could even get one) pretty soon.

Food and gas prices have been all over the news lately, and even a big dumb rodeo clown like me can see that it's all connected. Our policies, which try to cater to everyone from oil company executives to environmentalists, end up benefiting no one -- and now we're all paying the price.

I know that real economists probably will say that the causes of these skyrocketing prices are extremely complicated to understand, but the truth is that it's actually pretty simple: We've done this to ourselves.

I don't know if it's because of our arrogance, our stupidity or maybe both, but I believe that history may one day judge America as the most suicidal superpower of all time. After all, what country that cares about its future would do what America has done to its supply of food and fuel, two of the most critical things that any civilization needs to survive?

For example, look at the way we treat our food supply. We've spent decades giving billions of dollars in government subsidies with incentives for the wrong things, we've mandated that huge areas of farmland stay open for "conservation" and we're using grains that could feed tens of millions of people to make a crappy biofuel that you can't even buy anywhere.

That's not arrogance?

Our fuel policy has been even more absurd. We're completely dependent on foreign countries, many of whom hate us, to keep our trucks moving, our planes flying and our homes warm.

That's not arrogance and suicidal stupidity?

Take a look at the top five countries we currently rely on for oil imports. You tell me if these are the five you would choose if you were creating your own world superpower from scratch: Canada, Saudi Arabia, Mexico, Nigeria, Venezuela.

> ***"We're Using Grains That Could Feed Tens of Millions of People to Make A Crappy Biofuel That You Can't Even Buy Anywhere"***

Aside from Canada, that's not exactly a "Who's Who" list of stable, America-loving countries.

And if you think I cut off the list at five because the next five are so friendly, think again. Here's the next five: Iraq, Angola, Kuwait, Colombia, Ecuador.

The point is that we don't control our own destiny, foreigners do. Despite bipartisan hatred for high oil prices, they've gone up 49 percent since 2006. If we could've done something, anything, to stop that, we would have. But the sad fact is that we can't.

That's why, instead of offering real solutions, most politicians offer something else: blame. Democrats blame Republicans, Republicans blame Democrats, and nothing ever gets solved. President Bush provided a good example of that last week when he was asked about high oil and gas prices.

"We've had an energy policy that neglected hydrocarbons in the United States for a long period of time, and now we're paying the price. We should have been exploring for oil and gas in ANWR, for example," he said. "But, no ... our Congress kept preventing us from opening up new areas to explore in environmentally friendly ways. And now we're becoming, as a result, more and more dependent on foreign sources of oil."

Personally, I think the president is right; we should be drilling in the Arctic National Wildlife Refuge. In fact, we should've been drilling there a decade ago, but that's not the point anymore. Opening ANWR now would be like stopping at the bathroom on your way to the electric chair; you're only delaying the inevitable.

Should we still do it? Yes. Frankly, we need all the time we can buy ourselves to find a long-term solution; our nation's very survival is at stake. But ANWR is not the answer, it's a Band-Aid, and I worry that our short-sighted politicians would use it as an excuse not to look for viable replacements for oil, which is what we really need.

Fortunately, there is some good news in all of this: Oil prices this high mean that a lot of formerly dismissed alternatives will finally make good economic sense.

For example, back in 1980, Congress passed the Energy Security Act, which led to the creation of something called the Synthetic Fuels Corp. (SFC). Lawmakers provided SFC with up to $88 billion in loans and incentives to get started (the equivalent of about $230 billion in today's dollars) with the goal of creating two million barrels a day of synthetic oil within seven years.

So why aren't you putting SFC oil into your SUV right now? Well, it turns out that members of the Organization of Petroleum Exporting Countries didn't appreciate the competition so they started bringing down the price of oil. From 1980, when SFC launched, to 1986, when it was shut down, oil went from more than $39 a barrel to less than $8 a barrel. Suddenly, synthetic oil didn't seem so important anymore.

In announcing the SFC's closure, then-Energy Secretary John Herrington said that oil prices had simply dropped too low to make it a viable business.

But the good news is that those economics don't work anymore. The state of Montana, which is leading the synthetic fuel charge, says we can now make it for somewhere around $55 a barrel. That's more than a 50 percent discount from what it costs to buy the real stuff.

It's the opportunity of a lifetime, a chance to use OPEC's price gouging and monopoly against it.

So let me be the big, dumb rodeo clown once again and ask the obvious question: Why aren't we doing it? *cl*

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Arch Coal Licenses ADA-ES Coal Enhancement Technology

Arch Coal, Inc. recently announced that the two companies have finalized the previously announced exclusive development and licensing agreement for a promising ADA-ES technology aimed at reducing combustion-related emissions of mercury and other metals from PRB coal. In consideration for certain ADA development work and the exclusive license to Arch, ADA-ES will receive an upfront payment of $2 million and royalty payments that could amount to as much as $1 per ton of coal sold by Arch, depending upon the successful implementation of the technology and Arch's future sales of the resulting enhanced coal product.

Arch has been a significant shareholder of ADA since 2003 when the Company spun-out as a separate public entity. Arch currently produces more than 100 million tons of PRB coal per year.

Arch President and Chief Operating Officer John Eaves, who has served on the ADA Board of Directors since 2004, commented, "As part of our commitment to clean energy, we are pleased to provide this additional investment in ADA, a leader in developing clean coal technology. We believe helping finance advanced technologies developed by ADA will enhance the environmental performance of our coals."

ADA has been successful at developing technologies that improve the performance of PRB coals, including flue gas conditioning (FGC) chemicals used to aid in the collection of ash from PRB coals. The Company also developed a cost-effective brominated activated carbon technology that provides a means of achieving 90% removal of mercury emissions from PRB coals, as well as CyClean technology, a proprietary coal additive that improves combustion of PRB coals in cyclone boilers resulting in enhanced efficiency and reduced emissions of mercury and nitrogen oxides. Since 2004, ADA has been working with

Agreement Provides Upfront Payment of $2 Million and Structure for Potential Future Royalties

Arch to explore certain unique characteristics of some types of coals produced by Arch that allow them to be burned with lower emissions. A recent technical breakthrough provides a potential means to obtain similar performance improvements from all of Arch's PRB coals.

Mike Durham, ADA President and CEO, stated, "This new technology will be complementary to our other innovative technologies such as CyClean, FGC, and different activated carbons that provide us with the tools to help our power generating customers to meet the challenges of existing and pending emissions control regulations."

ADA-ES is a leader in clean coal technology and the associated specialty chemicals. We develop and implement proprietary environmental technology and specialty chemicals that enable coal-fueled power plants to enhance existing air pollution control equipment, maximize capacity and improve operating efficiencies. We supply activated carbon injection systems, mercury measurement instrumentation, and related services. Through our consolidated subsidiary, Clean Coal Solutions ("Clean Coal"), we produce refined coal that we expect will qualify for IRS Section 45 tax credits. To meet the needs of the power industry for mercury control, we are a participant in a joint venture, ADA Carbon Solutions ("ADA-CS"), which is developing state-of-the-art facilities to produce activated carbon ("AC") with the first plant projected to come on-line in 2010. Additionally, we are developing technologies for power plants to address issues related to emissions of carbon dioxide.

St. Louis-based Arch Coal is the second largest U.S. coal producer, with revenues of $2.6 billion in 2009. Through its national network of mines, Arch supplies cleaner-burning, low-sulfur coal to U.S. power producers to fuel roughly 8 percent of the nation's electricity. The company also ships coal to domestic and international steel manufacturers as well as international power producers. *cl*

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Coal Leader
Coal Industry News

National Coal Corp shut down

According to Knoxville News Sentinel a month after buying Knoxville-based National Coal. Corp., its new owners have effectively shut down the company and laid off its 155 employees, at least temporarily, said Dan Roling, former president and CEO of the company.

"We were told Dec. 28 that the new owners have decided to make some changes, and they have temporarily laid off all the operational people in mining and temporarily closed the mines that National Coal was operating," he said. "As far as the corporate office in Knoxville, that is being permanently closed, and the field office in Jacksboro is being permanently closed."

Roling said he was not told anything further about Southern Coal's plans. Southern Coal officials could not be reached for comment Monday. National Coal's main phone was answered with a recorded message that the Knoxville office was closed and included contact information for former employees who have questions about benefits and other employment issues.

National Coal was acquired Dec. 15 by Ranger Energy Investments LLC, which is controlled by West Virginia businessman James C. Justice II, who also controls Southern Coal Corp. Justice owns a number of coal companies, the Greenbrier resort in West Virginia and other enterprises. When the acquisition was announced in September, the new owners did not discuss their plans for National Coal, but Roling said at the time that he understood they were buying the company in order to grow their coal business.

National Coal and Ranger Energy have a history of dealings as National Coal has tried to work its way out of financial problems. In April, National Coal agreed to sell $10 million in coal mining assets near Oneida to Ranger Energy. As part of the deal, National Coal would receive $1.9 million to secure reclamation bonds and other liabilities involved in those mining operations. In August, National Coal announced a profit of $248,967 for second quarter 2010 but also said it was considering a number of strategic options including merging with other coal companies. In September, it announced it was being acquired by Ranger for $1 per share in cash for each share of National Coal common stock.

National Coal has operated mines throughout East Tennessee. National Coal in 2007 owned the mineral rights on 65,000 acres and operated two underground mines, six surface mines and two highwall mines.

Roling said the outlook for coal companies is tough now because of the economy and opposition to coal from politicians and environmentalists; still, he said National Coal was a good acquisition for its current owners.

"The company that acquired us got some very good assets with good future potential in the coal industry, and they know that," Roling said.

Prestigious Coal-Fired Project of the Year" Award Goes to Plant Demonstrating Innovative DOE Funded Technology

An innovative project demonstrating DryFining™ technology, a more cost-effective way to control coal-based power plant emissions while improving fuel quality, has been named the 2010 Coal-Fired Project of the Year by the editors of Power Engineering magazine.

The project, managed by the Office of Fossil Energy's National Energy Technology Laboratory, was developed with funding from the Department of Energy's Clean Coal Power Initiative and was originally implemented at Great River Energy's Coal Creek Station in Underwood, ND, in 2009. The prestigious Power Engineering industry award honors technologies that "ushered in breakthrough solutions" in coal-fired, gas-fired, nuclear, and renewable sustainable energy categories.

DryFining™ is a more affordable way to control emissions while improving fuel quality by simultaneously drying and refining coal and reducing potentially harmful emissions. The process not only uses power plant waste heat to reduce moisture, but also generates more energy from less coal.

Because DryFining™ segregates particles by density, a significant amount of higher density compounds containing pollutants can be removed rather than oxidized in the boiler. This results in reduction of emissions of mercury and sulfur dioxide by 40 percent, nitrogen oxides by 20 percent, and carbon dioxide by 4 percent, all major potential pollutants that result from coal-based combustion, while maintaining low emission-control costs. Removal of water vapor prior to combustion decreases the volume of flue gas by 17 percent and improves the efficiency of fans, motors, and existing emissions control equipment.

The project was originally tested in Great River Energy's 546-megawatt Coal Creek Station Unit 2. Following a successful increase in boiler efficiency and reduction of emissions, Great River Energy expanded the project by building full-scale dryer modules for the entire Coal Creek Station.

Nearly one-third of the electric power generated by coal in the country comes from plants that burn high-moisture coal, making this technology an important development for efficiently powering the Nation. Great River Energy noted that DryFining™ has a lower initial cost of installation and reduces expenses by more than $20 million annually. The financial and operational advantages to the Coal Creek Station, in comparison to alternative emissions control equipment, could eventually be seen in similar plants with the addition of the DryFining™ system.

Other team members on the DryFining™ project were Lehigh University, WorleyParsons, Heyl & Patterson, and EPRI.

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Arch Energy Resources joins globalCOAL

globalCOAL® announced recently that St-Louis based Arch Energy Resources LLC has joined the globalCOAL trading platform as a Market Member.

Arch Energy Resources LLC is a subsidiary of Arch Coal, the second-largest coal producer in the United States which supplies approximately 16% of the country's coal through its eleven mining complexes in Wyoming, Utah, Colorado, West Virginia, Kentucky, and Virginia. The Arch Energy Resources group's activities center on coal and emissions trading, coal procurement and terminal management activities. Arch Coal is traded on the New York Stock Exchange under the ticker symbol ACI.

"globalCOAL is happy to bolster its U.S. representation with this new Market Member", says Eoghan Cunningham, CEO of globalCOAL. "Arch Coal is a major US coal producer controlling a vast domestic reserve. Their interest in the seaborne traded market is a good indication that we might see increasing participation from US□based players into the SCoTA® market."

About globalCOAL®

globalCOAL was founded by leading members of the world coal industry to promote screen trading of standardized coal products with offices in London and Singapore. For more information, please visit www.globalcoal.com

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Coal Leader
Coal Industry News

Energy-Efficient Coal-Fired Chinese Power Plant Approved

The first phase of the Youxian supercritical coal-fired power plant project, to be managed by Datang Huayin Electric Power Company Limited, has received final approval from China's National Development and Reform Commission. As a result, construction is ready to begin on the proposed Huayin Youxian Power Plant, which will replace small, coal-fired units in Hunan province.

Datang Huayin Electric Power, a subsidiary of China Datang Corp.is based in the Changsha, Hunan province. The power plant, which will have a total planned capacity of 2,400 megawatts, will be built in two phases. In the first phase, two 600-megawatt supercritical coal-fired units will replace 410 megawatts of small, coal-fired units in Hunan province.

The new plant will be more energy-efficient than the plants it replaces. All slag emitted from the new power plant will be fully utilized. Using the latest energy conservation equipment, energy consumption indicators for the project will be lower than the national average in China, China Datang announced.

Once it is complete, the project could save about one million metric tons of coal while reducing the emission of sulfur dioxide by 4,441 tons every year and soot by 3,359 tons every year.

The plant is expected to supply enough power to alleviate power shortages in Hunan province during the period covered by China's 12th Five-Year Plan, covering from 2011 to 2015, China Datang said.

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International Coal Group's ICG Beckley Operation Receives Prestigious National Aware From Federal Office Of Surface Mining

International Coal Group, Inc. ICG was honored for outstanding active mine reclamation and community involvement by the federal Office of Surface Mining Reclamation and Enforcement. The Gold Good Neighbor Award for Excellence in Surface Coal Mining was presented to ICG Beckley at the National Mining Association Awards dinner recently in Washington, DC.

The award recognizes companies for successfully working with surrounding landowners and the community while completing mining and reclamation projects. ICG Beckley was honored for its work in the local Eccles, West Virginia, community that went above and beyond what is required by regulators. Among its activities, the mining operation established a Community Advisory Panel to facilitate communications with local residents and community leaders, voluntarily reclaimed an unsightly coal refuse site abandoned by a prior operator decades ago, constructed and paved new roads and bridges, improved a local memorial cemetery, installed drainage control measures and pump systems to control rain runoff, completed noise reduction projects, donated bleachers for a community little league baseball field, and supported a local food pantry.

"The Gold Good Neighbor Award is a remarkable accomplishment that recognizes the dedication and commitment of our ICG Beckley employees to working with the local Eccles community and to being a good neighbor during the construction and operation of the Beckley mine, all while maintaining the highest standards of mining reclamation," said Ben Hatfield, ICG's President and CEO.

The Gold Good Neighbor Award was the second prestigious award received by ICG Beckley in 2010. The operation earned the coveted Greenlands Award for overall outstanding environmental stewardship by the West Virginia Department of Environmental Protection.

ICG Beckley employs 289 people at its Eccles, West Virginia-based underground mine and preparation facilities.

ICG is a leading producer of coal in Northern and Central Appalachia and the Illinois Basin. The Company has 13 active mining complexes, of which 12 are located in Northern and Central Appalachia and one in Central Illinois.

ICG's mining operations and reserves are strategically located to serve utility, metallurgical and industrial customers domestically and internationally.

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Bucyrus International, Inc. Receives External Assurance on Inaugural Sustainability Report

Bucyrus International, Inc. , a world leader in the design and manufacture of mining equipment, announced recently that the organization has received external assurance, conducted by ISOS Group, LLC(www.isosgroup.com) for their inaugural Sustainability Report, has achieved a B+ rating in accordance with the Global Reporting Initiative's Sustainability Reporting Guidelines.

The Global Reporting Initiative guidelines set a global framework for reporting the economic, environmental and social dimensions of an organization's activities, products and services (www.globalreporting.org)

Bucyrus has committed to reporting sustainable development performance in a clear and transparent manner while incorporating sustainability into day-to-day operations. "This is not a short-term project, but a long-term focus on doing what is right for our organization, our stakeholders and our world.

We are committed to embracing sustainability to guide the way we design and manufacture our machines as well as placing sustainability at the forefront of our business and our interactions with our communities, suppliers, customers, and employees," said President and CEO Tim Sullivan.

Bucyrus' sustainability vision is to have a positive, lasting effect on our world through supporting the communities in which we live and operate, improving environmental and safety performance, and creating long-term, sustainable economic growth. Some highlights from Bucyrus' inaugural report include:

- Bucyrus Chile was recognized by the Chilean National Safety Council for excellent safety performance for the Company as a whole and as a provider of mining machine and repair contract services.
- Bucyrus' LatchFree Dipper System has fewer moving parts, which translates directly into greater safety.
- Bucyrus China sponsors students, provides scholarships and recognizes excellent postgraduates and teachers at the China University of Mining Technology.
- Bucyrus Brazil sponsors Projeto Minas Meio Ambiente, a project that promotes environmental education for the defense of the remnants of Brazil's Atlantic Forest and promotes the conservation of biodiversity and water resources.
- Bucyrus supports the growth of clean coal technology through board memberships on the industry's premier associations as well as direct financial contributions to fund research.

Bucyrus is committed to being a dependable partner to its customers, employees, communities.

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Systems Company Trolex Celebrates Its 50th Anniversary

The family company owned and operated by John Pierce-Jones now sees the introduction of his two sons appointed to the board to mastermind the new direction for the company.

Glyn Pierce-Jones becomes Managing Director with special responsibilities for product certification and sales and marketing and Lee Pierce-Jones becomes Operations Director with responsibility for production, quality and research and development. John Pierce-Jones takes up a new role as Chairman of Trolex.

Commenting on the new developments at Trolex, Glyn Pierce-Jones said, “This is an exciting time for Trolex as we build on the company’s firm reputation over the last 50 years as a world leader in the design and manufacture of sensors and systems for tunnelling, mining and hazardous industry. We are planning a rapid expansion and growth programme and we believe we have the potential to triple sales over the next three to four years.” He continued, “ Trolex is already a global brand and this is reflected in the new brand image which we have already introduced this year across all areas of the company. We have a newly formed Industrial Division to expand into this area in parallel with mining, and we are focusing on creative product development whilst always maintaining the quality of our products and service and ensuring absolute integrity and complete safety.”

Lee Pierce-Jones, Operations Director and Glyn Pierce-Jones, Managing Director

Established in 1960, Trolex started with just four men in a shed with a vision, and even in that first year of operation the company was designing pumping schemes and installing panels for some of the biggest mining pits in the UK. As one of the founders, John Pierce-Jones has taken Trolex forward to become a global leader in its field with sales of over £10 million per annum. Today, the company serves the multiple markets of mining, tunnelling, industry, gas recovery and rail, with a full range of gas detection and environmental monitoring systems and equipment. This includes gas detection, temperature, flow, pressure, vibration and level sensors from basic monitoring through to complex systems with SCADA interface.

Safety standards are ensured through ATEX certification of products and quality through its operating introduction of SIL 2 systems and through operating ISO 9001 throughout the company. Now employing some 50 people, Trolex operates from wholly owned 3000m² premises in Stockport, Manchester where there are full manufacturing facilities, R&D and electronics laboratories, testing and inspection, bonded stores as well as sales and administration offices. Further information is available from Trolex Ltd., on 0161 483 1435, email info@trolex.com or by visiting the company’s website at www.trolex.com

AEP Blasts EPA Transport Rule PSEG Supports It

By: Chris Holly

An Environmental Protection Agency proposal to tighten sulfur dioxide and nitrogen oxides limits in 31 states and the District of Columbia to address transported air pollution fails to give utilities and state air regulators sufficient time to develop rules and install controls, according to American Electric Power Co. Officials from the EPA and New Jersey-based Public Service Enterprise Group said utilities already had begun making investments to cut emissions and they believed the agency's compliance schedule could be met.

Columbus, Ohio-based AEP made its case against EPA's new interstate Transport Rule in written testimony at a hearing called by the Senate Environment and Public Works Committee's subcommittee on clean air and nuclear safety to review the agency's action.

The proposed rule, unveiled July 6, calls for a new round of emission limits beginning in 2012, and a second round beginning in 2014, in 31 states and the District of Columbia. EPA said that by 2014, the proposal would cut sulfur dioxide (SO2) emissions by 71% and nitrogen oxides by 52% compared to 2005 levels.

AEP said EPA was giving utilities and states only a matter of months to comply with Phase 1 of the program.

"Assuming the proposed rule goes final a little less than a year from now (i.e. EPA's current schedule is spring 2011), Phase 1 of the program would allow only a little more than six months in total to implement the new emission budgets, establish emission trading programs and for companies to make the needed investments to comply with these new limits," AEP said.

"Six months, let alone a year or two, is not nearly enough time for this. Having brand new emission caps, state budgets and allowance allocations in 2012 creates major logistical challenges for the electric power sector and for the states that must implement the programs."

AEP's concerns were echoed by Sen. George Voinovich (R-OH), who warned that the timetable, as well as provisions in the rule that allow intrastate, but not interstate, emissions trading, will make it difficult and expensive for utilities to comply. Compounding these problems, Voinovich said, is EPA's declaration that it may need to further tighten the rule if the agency finalizes, as is widely expected, more stringent national ambient air quality standards (NAAQS) for ozone and fine particulate matter.

"These timetables do not recognize the logistical or political realities associated with designing, permitting and installing the equipment to meet the mandates," Voinovich said. "And because the proposal virtually eliminates emissions trading as a compliance option, the regulatory hurdles will be all that much greater.

"Adding to the challenge, EPA is proposing to revise the emissions caps as new NAAQS are promulgated. This means that the electric sector will face ever changing compliance hurdles that will provide little clarity for business planning purposes."

The proposed rule is intended to replace the now-defunct Clean Air Interstate Rule (CAIR), a regional air pollution program established by the Bush administration in 2005. CAIR was vacated by the U.S. Court of Appeals for the District of Columbia Circuit, which found that the regulation, among other flaws, failed to sufficiently reduce pollution from upwind sources that contribute to the failure of downwind states to meet 1997 NAAQS for ozone and fine particulate pollution, or soot.

Regina McCarthy, EPA assistant administrator for air and radiation, said EPA thinks that the power sector will be able to meet the 2012 emission cuts because utilities in states affected by the proposal already have made substantial investments in pollution controls in anticipation of the CAIR emission limits.

"What we have indicated is we believe that with the investments that have been made already in response to CAIR and with what we believe are investment opportunities before 2012, that we should be able to achieve compliance with the standards we have set in the transport rule and that will generate very cost-effective reductions and they do primarily take advantage of the investments that have already been made," McCarthy told reporters following the hearing.

Eric Svenson, vice president for policy and environment, health and safety at Public Service Enterprise Group, which is a utility that relies heavily on nuclear, gas-fired and renewable generation said: "PSEG believes that the electric power industry can meet the emission caps and timelines proposed by the transport rule."

Svenson added that his company believes "the rule proposes a reasonable compliance structure given the constraints imposed on EPA by the D.C. Circuit Court's decision to remand [CAIR]."

The hearing came as Democrats on the House Appropriations Committee's subcommittee on interior and environment beat back a Republican amendment to EPA's fiscal year 2011 funding bill that would have barred EPA from spending any money to finalize a new NAAQS for ozone. *cl*

Atlas Copco Appoints New Positions

Eugene Mattila, Business Line Manager – Rock Drilling Tools for Atlas Copco Construction and Mining USA announces the appointment of Jason Blais as Product Line Manager of down-the-hole products.

Mattila said of Blais, "Jason's unique background of hands-on drilling, direct sales, district management, and store management will contribute significantly to the growth of the DTH line of products to all channels within Atlas Copco Construction and Mining. That, combined with his drive and enthusiasm, will provide immediate impact."

Blais will be located near the Atlas Copco Ft. Loudon, PA, assembly and distribution facility and the Roanoke engineering group.

Blais, former manager of Atlas Copco's Baltimore store, will continue to run that location until a suitable replacement is found, ensuring a smooth transition for the new manager and the store's customers.

Mattila added, "We would also like to thank Steve Jenkins for his hard work in his former position as Product Line Manager, and we look forward to his continued contributions in sales moving forward." cl

Weather May Send Coal Prices Soaring

According AFP News we are facing a shortage of coal worldwide. Australia is being hit with major flooding and this could seriously limit the world's coal supplies, driving up prices and raising inflationary pressures throughout the global economy. The huge northeastern state of Queensland, now largely under water, provides half the world's needs for coking coal used in the steel-making industry. Reports say it could take several weeks to reopen the mines, which have been physically flooded. Mines that have not been flooded will be dependent on the reopening of rail systems.

According to IHS Global Insight, the floods in Australia have led to the closure of an estimated 90 million tons of annual production capacity. Premium Peak Downs brand coking coal in Queensland was last quoted by the Commonwealth Bank of Australia at 253 US dollars a ton. Six months ago the price barely scraped 200 dollars. Disruption to suppliers is forecast to last until into early February 2011, and competition for cargoes could increase on the spot market, pushing up prices further, particularly due to supply-security concerns.

"The high prices for coking coal will probably be passed on by steel manufacturers, pushing up prices of steel and therefore construction costs for steel-intensive facilities such as oil refineries and petrochemical facilities."

Amrita Sen, Barclays Capital analyst said the coal market was already tight entering 2011. "Demand from Asia is already very strong, but with these weather problems, it has become significantly tighter," she said.

Including steam coal exports, Australia is the largest of the world's five main coal exporters, the Barclays analyst added.

Before the disastrous flooding in Queensland, major coal exporters - Colombia and Indonesia also had been hit by heavy rains, which had affected production. The derailment of a train in South Africa had blocked exports for several days at the end of last year.

Sen pointed out that coking coal was not a very widely traded market because prices were set in contract negotiations.

"As a result, the spot market is a very small percentage of the total," she said, compared with steam coal, used by power plants.

"While spot coking coal prices are also up, given that steam coal is a bigger traded market, the price increases have been more visible."

Unlike oil, metals or agricultural commodities, the coal market does not have a benchmark contract by which global trade can be measured.

Analysts following steam coal look at the API-2 index of prices in the Dutch ports of Amsterdam and Rotterdam, and in Belgium's Antwerp.

The steam coal market, considered one of the most active in the world, has seen prices rise from about 100 dollars a ton in early December to 130 dollars.

In the United States, the New York Mercantile Exchange launched a coal futures market in 2001 on steam coal mined in the Appalachian Mountains in the eastern part of the country.

Although that market is considered fairly local, prices have jumped from under 75 dollars a ton in December to more than 80 dollars.

"For a long time prices have been set by direct negotiations between the producer and the consumer," said Philippe Chalmain, economics professor at the Paris-Dauphine University in the French capital.

"Today, especially for the steam coal market, it's beginning to become a market like the others."

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Peter LaFosse Named New Paladin Construction Group Territory Manager

Paladin Construction Group has appointed Peter LaFosse to the position of Territory Manager, covering the northeast United States. Pete will play an integral role in Paladin's efforts toward the strategic growth of sales initiatives as well as provide support for dealers including educating them on the Back 2 Work program designed to help contractors easily locate the right dealer and attachments for their needs. He will also encourage dealers to take advantage of the Contractor Rebate worth up to $500.00.

Pete has 23 years of experience in the construction equipment and attachment business, most recently working at CN Wood as Remarketing & Utility Sales Manager. He also has extensive experience in heavy construction equipment sales having served in various sales and management positions at Nortrax Equipment, Woods Equipment and Southworth Milton. He will work directly with customers in Paladin's northeast territory of the United States, which includes: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, eastern New York, Rhode Island, Vermont and Virginia.

"Pete's been on-site with contractors and has a history of finding solutions for their specific attachment needs," commented Dave Crummy, Vice President Dealer Sales. "Customers look for reliability and durability in their attachments, so his experience meshes well with Paladin and its eight Brand companies' extensive product lines."

Pete can be reached at 603-289-9815 or e-mail plafosse@paladin-brands.com. cl

Distinguished Academic Leader to Serve as WPI's Inaugural Dean of Engineering

Worcester Polytechnic Institute (WPI) announced recently that Selçuk I. Güçeri, PhD, will join the university as its inaugural Bernard M. Gordon Dean of Engineering.

For the past 10 years, Dr. Güçeri served as dean of engineering at Drexel University, leading the nation's largest engineering college among private universities. Under his leadership, Drexel engineering nearly tripled its research funding, significantly increased the number of women faculty and students and the degree of student diversity, and fostered more than a dozen technology-based start-up companies. An accomplished scholar, Dr. Güçeri has authored or co-authored over 100 publications in the fields of manufacturing, materials mechanics, and software development. He will join WPI in early 2011. Born in Turkey, Dr. Güçeri earned bachelor of science and master of science degrees in mechanical engineering at Middle East Technical University in Ankara and completed a PhD as a NATO Fellow at the North Carolina State University Department of Mechanical and Aerospace Engineering.

Before joining Drexel he was professor and head of the Department of Mechanical Engineering at the University of Illinois at Chicago. Prior to that, he served on the mechanical engineering faculty at the University of Delaware.

WPI created the Gordon Deanship with an endowment gift from Bernard M. Gordon, founder of Analog Corporation and NeuroLogica Corporation, and a member of the WPI Board of Trustees. Gordon is known for his inventive mind, extraordinary record of technological leadership and business development, and passionate views on engineering education.

"Bernie Gordon funded

Academic Leader Conton Page 11

Academic Leader Cont from Page 10

this position to enable WPI to provide leadership for our engineering programs in the spirit of purposeful achievement that has defined his career," said WPI President Dennis Berkey. "Dean Güçeri is just such leader, with extensive achievements in important research, academic innovation, and entrepreneurship. He shares a deep commitment to WPI's long tradition of producing engineering graduates well prepared to make important contributions to economic and technological development, and societal advancement. We are most fortunate to have attracted Dean Güçeri to WPI, and we are very grateful to Bernie Gordon for his vision and support for this leadership position."

The appointment of the Gordon Dean of Engineering completes WPI's plan to create and fill three inaugural academic deanships. Earlier this year Mark P. Rice, PhD, formerly dean of graduate business programs at Babson College, was appointed Dean of WPI's new School of Business; and Karen Kashmanian Oates, PhD, formerly deputy for undergraduate education at the National Science Foundation and an experienced dean and provost, was named the Donald I. Peterson Family Dean of Arts and Sciences.

In addition to leading their respective academic areas, the new deans will work together and with the faculty across the Institute to advance WPI's distinctive undergraduate programs, with their emphasis on project-enriched collaborative learning. The deans will also work to advance research and graduate education in such important fields as alternative energy, advanced materials, regenerative medicine, robotics, and information security, and novel developments across the disciplines. "We are a small enough university to be free of barriers among the disciplines, but large and complex enough to have the richness of resources and intellectual capacity to make substantial contributions to important problems," said President Berkey. "The model here, of purposeful learning through collaborative inquiry, is really a new synthesis of what the best of higher education can be." WPI's purposeful, collaborative culture was a large part of Dean Güçeri's decision to join WPI. He cites WPI's innovative interdisciplinary programs, which combine technology, science, business and the arts and humanities, as offering outstanding opportunities to produce the effective professionals needed to address such globally important issues as energy, healthcare, cyber security, and clean water. "The only way our society can effectively address such serious challenges is if the engineers we educate learn to work and collaborate with their colleagues in business, policy making, and other endeavors directly impacting our world," said Dean Güçeri. Eric W. Overström, WPI provost ad interim said, "Dean Güçeri is an accomplished leader and scholar with experience expanding research, developing innovative learning programs, recruiting and mentoring high-quality faculty and students, and growing undergraduate and graduate enrollment. He has led major efforts to develop programs that embrace cultural, social, and global perspectives – all major components of WPI's approach to education. He is an extraordinarily good fit for our goals and our culture."

Founded in 1865 in Worcester, Mass., WPI was one of the nation's first engineering and science universities. Its 14 academic departments offer more than 50 undergraduate and graduate degree programs in science, engineering, technology, management, the social sciences, and the humanities and arts, leading to bachelor's, master's and PhD degrees. WPI's world-class faculty work with students in a number of cutting-edge research areas, leading to breakthroughs and innovations in such fields as biotechnology, fuel cells, information security, materials processing, and nanotechnology. There are more than 25 WPI project centers throughout North America and Central America, Africa, Australia, Asia, and Europe. *cl*

Prestigious "Coal-Fired Project of the Year" Award Goes to Plant Demonstrating Innovative DOE-Funded Technology

An innovative project demonstrating DryFining™ technology, a more cost-effective way to control coal-based power plant emissions while improving fuel quality, has been named the 2010 Coal-Fired Project of the Year by the editors of Power Engineering magazine.

The project, managed by the Office of Fossil Energy's National Energy Technology Laboratory, was developed with funding from the Department of Energy's Clean Coal Power Initiative and was originally implemented at Great River Energy's Coal Creek Station in Underwood, ND, in 2009. The prestigious Power Engineering industry award honors technologies that "ushered in breakthrough solutions" in coal-fired, gas-fired, nuclear, and renewable sustainable energy categories.

DryFining™ is a more affordable way to control emissions while improving fuel quality by simultaneously drying and refining coal and reducing potentially harmful emissions. The process not only uses power plant waste heat to reduce moisture, but also generates more energy from less coal.

Because DryFining™ segregates particles by density, a significant amount of higher density compounds containing pollutants can be removed rather than oxidized in the boiler.

This results in reduction of emissions of mercury and sulfur dioxide by 40 percent, nitrogen oxides by 20 percent, and carbon dioxide by 4 percent, all major potential pollutants that result from coal-based combustion, while maintaining low emission-control costs. Removal of water vapor prior to combustion decreases the volume of flue gas by 17 percent and improves the efficiency of fans, motors, and existing emissions control equipment.

The project was originally tested in Great River Energy's 546-megawatt Coal Creek Station Unit 2. Following a successful increase in boiler efficiency and reduction of emissions, Great River Energy expanded the project by building full-scale dryer modules for the entire Coal Creek Station.

Nearly one-third of the electric power generated by coal in the country comes from plants that burn high-moisture coal, making this technology an important development for efficiently powering the Nation. Great River Energy noted that DryFining™ has a lower initial cost of installation and reduces expenses by more than $20 million annually. The financial and operational advantages to the Coal Creek Station, in comparison to alternative emissions control equipment, could eventually be seen in similar plants with the addition of the DryFining™ system.

Other team members on the DryFining™ project were Lehigh University, WorleyParsons, Heyl & Patterson, and EPRI.

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Four Sites Advance in FutureGen CO2 Storage Site Competition

The FutureGen Alliance announced recently that sites in four Illinois counties will advance to the next stage of the competition to host the FutureGen 2.0 carbon dioxide (CO2) storage site, visitor center, research, and training facilities. The counties are Christian County, Douglas County, Fayette County and Morgan County. The Alliance selected the sites because they have geology that provides the best potential for safe, secure long-term storage for CO2, as well as other technical and legal criteria.

During the next stage of the site selection process, the Alliance will continue its geologic and legal study of the potential host sites. Counties and communities will have the opportunity to strengthen their proposals to host the project, and the Alliance will continue to work with local stakeholders to assure community support before making a final siting decision. As part of this due diligence, additional geophysical surveys will be conducted in Illinois during January. The results of these surveys will provide additional geologic data to support the selection of a final site in mid-February. These actions also serve to keep the overall project on schedule.

FutureGen Alliance Chief Executive Officer Kenneth K. Humphreys noted: “As we move forward, we have an exceptional portfolio of sites from which to choose. The site ultimately selected will be the host to a CO2 storage site as well as visitor, research, and training facilities. The capital investment in the storage site will exceed $100 million dollars and will be an economic boost for the host community. Further, local landowners will be compensated for the use of geologic storage space. The underlying geologic storage space currently sits idle and is generally about one mile deep in these counties. These facilities are critical to the success of a larger effort to build the world’s first near-zero emissions power plant in west central Illinois. It is estimated that the combined effort will result in more than 1000 construction jobs and 1000 service sector jobs within Illinois. Total investment in the FutureGen 2.0 project will exceed $1 billion dollars.”

Using safe, proven pipeline technology, the CO2 storage facility will receive and store emissions from an Ameren Energy Resources power plant in Meredosia, Ill. that will be upgraded with advanced oxy-combustion technology. The FutureGen 2.0 technologies have the potential to repower the world’s fleet of coal-fueled power plants in a manner that largely eliminates their emissions, spurs job creation and substantially advances clean energy technology around the globe.

FutureGen 2.0 is supported by a $1 billion commitment in federal funding from the American Recovery and Reinvestment Act. *cl*

Bucyrus 25C: A Powerful New Compact Continuous Miner

Weighing in at 61 tons (135,000 lb), the new Bucyrus 25C continuous miner incorporates all the robust features of the 25M series plus new features and enhancements. With 2 x 205 kW (2 x 275 hp) cutter-head motors, it is the most powerful continuous miner in its class. Designed for operating heights of 0.86 – 3 meters (34 in to 120 in) in low to midseams with hard cutting conditions such as rock inclusions, the 25C is equipped with 164 kW (220 hp) Variable Frequency Drive (VFD) traction control for higher speeds and greater control. It offers new features for maximum efficiency, productivity and extended service life.

CONTROL

The 25C features the latest evolution machine control system with a larger transmitter. A new generation hydraulic system features pressure and flow on demand as well as fewer components and increased component life. Both the hydraulic and VFD systems provide machine protection.

CUTTING

The 25C operates a broad range with maximum rated cutting head power. The cutter-head motors are protected by a torque-limiting clutch to prevent damage in the event of a rock strike. The high strength steel drums features 5.1 cm (2 in.) thick walls with maximum bit tip standoff.

CONVEYING

The 96.5 cm (38 in.) conveyor provides higher throughput with a bi-directional discharge forming an integral part of the mainframe. A hydraulic take-up maintains proper chain tension for all conveyor positions and extends chain life.

MANEUVERING

The164 kW (220 hp) Variable Frequency Drive (VFD) traction control provides higher speeds and greater torque to ground control which combined with the machine geometry facilitates cross-cut turning.

MAINFRAME

One-piece highly robust frame uses 75 mm (2.9 in.) steel plate – 50% thicker than competitors. The heavier, rigid frame allows more efficient cutting when sumping at the top of the seam and ripping to the bottom. The support frame fabricated from high-strength steel has massive steel legs 15.25 cm (6 in.) thick. The largest-in-class boom pivot bores feature hardened steel pins and replaceable bushings. The robust clevis and frame have fewer weld joints subject to tension.

MAINTENANCE

The 25C is designed for easy maintenance with independent cutter heads, traction, control systems, and wethead technology. Diagnostics are located for easy access.

Bucyrus is a world leader in the design and manufacture of high-productivity mining equipment for the surface and underground mining industries. Bucyrus surface mining equipment is used for mining coal, copper, iron ore, oil sands and other minerals. Bucyrus underground mining equipment is used primarily for mining coal, and also used for mining minerals such as potash and trona. cl

Alpha Natural Resources and Massey Energy Signed Agreement - Cont from Page 1

Alpha Natural Resources, Inc. and Massey Energy Company announced that they signed a definitive agreement under which Alpha will acquire all outstanding shares of Massey common stock, subject to customary closing conditions including stockholder approval of both companies. Under the terms of the agreement, Massey stockholders will receive, at the closing, 1.025 shares of Alpha common stock and $10.00 in cash for each share of Massey common stock.

The merger will bring together Alpha's and Massey's highly complementary assets, which include more than 110 mines and combined coal reserves of approximately 5 billion tons, including one of the world's largest and highest-quality metallurgical coal reserve bases. Alpha and Massey believe the new entity will be well positioned to capitalize on strong global demand trends for coal including the metallurgical coal used in the steel manufacturing process. Further, the combination is expected to permit Alpha and Massey to benefit from geographical and asset diversification, including operations and reserves in Central and Northern Appalachia, the Illinois Basin and the Powder River Basin in Wyoming.

The resulting company will have an attractive financial profile with expected pro forma 2010 revenues of approximately $6.9 billion and the highest free cash flow generation of any pure-play U.S. coal company, a responsible balance sheet, and significantly enhanced scale with a combined enterprise value of approximately $15 billion.

"We're very pleased that Massey has chosen to join forces with Alpha and commit to this truly transformational deal," said Kevin Crutchfield, Alpha's chief executive officer. "Together we will be America's largest supplier of metallurgical coal for the world's steel industry and a highly diversified supplier of thermal coal to electric utilities in the U.S. and overseas. The strategic and operational fit of our two companies is clear and compelling. Both companies' stockholders will gain an opportunity to participate in the upside potential of a global industry leader with a robust production portfolio, attractive growth profile and substantial reserve base. Together, we are committed to creating a stronger company that has the scale to capitalize on further growth opportunities, succeed in a changing regulatory landscape and maintain the absolute highest standards in safety and environmental excellence."

Baxter F. Phillips, Jr., Massey's chief executive officer and president, stated, "This transaction represents a tremendous opportunity for Massey to partner with our Central Appalachian neighbor, Alpha, to create a new industry leader. After a careful review of a wide range of strategic opportunities, our board unanimously determined that this is the right course for our company. The merger with Alpha offers Massey stockholders an immediate and substantial premium, as well as the opportunity to participate in the significant value creation opportunities our combination presents. We have always respected Alpha's passion for this business and we believe this is a natural and logical combination that has great upside for our members, communities, customers and other important constituents." cl

U.S. Power Plants Shifting Away From Coal

According to the Washington Post power plants are shifting away from coal. The headline news for the coal industry in 2010 was what didn't happen: Construction did not begin on a single new coal-fired power plant in the United States for the second straight year. This in a nation where a fleet of coal-fired plants generates nearly half the electricity used.

But a combination of low natural gas prices, shale gas discoveries, the economic slowdown and litigation by environmental groups has stopped - at least for now - groundbreaking on new ones.

"Coal is a dead man walkin'," says Kevin Parker, global head of asset management and a member of the executive committee at Deutsche Bank. "Banks won't finance them. Insurance companies won't insure them. The EPA is coming after them. . . . And the economics to make it clean don't work."

From 2000 to 2008, construction started on 20 units in 19 plants, according to Edison Electric Institute. Last year, utilities and power-generating companies dropped plans to build 38 coal plants while announcing that they would retire 48 aging, inefficient ones, according to the environmental group Sierra Club. Although 2010 saw the collapse of climate legislation in the Senate, the Sierra Club is trumpeting such statistics as a sign that "coal is a fuel of the past."

The battle over coal plants could sharpen in 2011, as the Environmental Protection Agency (EPA) deploys regulations to improve the efficiency - and lower the greenhouse gas emissions - of big power plants.

The EPA now requires builders of plants big enough to emit 75,000 tons of carbon dioxide a year to use the "best available control technology" in order to obtain air permits, needed before construction. Utilities, oil refiners and other industries argue that this will add prohibitive costs, and many Republican lawmakers have vowed to handcuff the EPA, which is also planning to issue broader guidelines later in the year.

In the wake of the midterm elections, President Barack Obama identified promotion of natural gas use as an area of potential bipartisan action. He hopes to prod utilities and manufacturers into switching from coal to natural gas, which emits half the amount of greenhouse gases. The choice looms large given that the average age of the U.S. coal fleet is 43 years, with more than half the plants built before 1967.

Word of coal's death might be premature, says Luke Popovich, spokesman for the National Mining Association. He said that several coal-fired plants begun earlier are still under construction. Duke Energy, for example, is expecting to finish its Cliffside and Edwardsport coal plants in 2012.

Other companies have scrambled to get permits before the EPA regulations take effect, and projects in Texas, Kansas and Illinois have succeeded. A project in Mississippi is poised to break ground, though the Sierra Club is still fighting in court to revoke the plant's permits.

Moreover, Popovich adds, the federal Energy Information Administration (EIA) expects that the nation will need to build 30 to 40 new plants to supply the 21 gigawatts of new electricity demand expected by 2035.

"Coal will remain the dominant source for electricity generation for the foreseeable future," he says. "So the big problem with the 'death of coal' message is that it is not, as we say, reality-based." Even if coal is not dead, developments of the past two years have dimmed its future.

"Word of coal's death might be premature, says Luke Popovich, spokesman for the National Mining Association"

The fate of the long-planned Smith Unit No. 1 coal plant in Kentucky is one example. The East Kentucky Power Cooperative announced plans five years ago to build the 278-megawatt plant, and it obtained permits from the Kentucky Public Service Commission. But environmental groups, joined by critics of federally subsidized loans to rural electric cooperatives, fought the project.

Then the recession hit and tipped the scales. A couple of months ago, the cooperative slashed 9 percent from its forecast of electricity demand among the half-million customers it serves.

As a result, East Kentucky Power canceled the Smith coal plant construction on Nov. 18, even though it has spent about $150 million stockpiling steel and parts. "And that's almost entirely due to the economy," says Nick Comer, the cooperative's manager of external affairs. Finishing the plant would have cost an estimated $819 million more. "Back in 2006-07, the economy was roaring. In our service territory we were seeing growth at about twice the national rate," Comer says. "There were a lot of new houses, new businesses; even manufacturing was expanding."

But, Comer adds, "a lot of that has changed today. Housing starts are down. Manufacturers have cut back. So we expect demand for electricity is going to be down from what we had projected for a while."

The story is the same across the nation. Coal consumption in the electric power sector during the first nine months of 2010 was up from 2009, but still down 5.7 percent from 2008's near-record levels, according to EIA figures.

East Kentucky Power also signed a settlement with environmental groups under which it will install additional pollution control devices and further explore renewable energy options.

American Electric Power (AEP), the nation's largest generator of electricity, also is taking a cautious approach. The only plant AEP has under construction is the highest efficiency model, known as "ultra supercritical." Under the new EPA guidelines, these high-efficiency plants could become the standard, reducing coal use.

"We have no other coal-fueled generation planned at this time," says Pat Hemlepp, a spokesman for AEP. "The decline in demand has delayed the need for additional new generation."

If AEP does need new generation capacity, it will turn to natural gas. In 2010, the wellhead price of natural gas has averaged $4.25 a thousand cubic feet, about 40 percent below the average price from 2005 to 2009 and well under half the peak price.

Discoveries of new ways to tap natural gas trapped in shale rock have unlocked supplies that could keep prices in check for years to come.

"When we do need new capacity, it is highly likely that we will look to natural gas plants instead of coal, especially if natural gas prices remain as low as projected," Hemlepp says. "The plants are less expensive to build, and current forward price projections favor gas over coal."

It's a decision being made by utilities across the country. A recent Deutsche Bank report says that if gas prices remain between $4 and $6 a thousand cubic feet, "we believe that a coal-to-gas switch makes sense." Even though Congress

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Tourism Responsible for Global Carbon Emissions

Tourism is estimated to be responsible for about 5% of global carbon emissions. Air passenger transport is the major, and a growing, contributor to global Greenhouse Gases (GHGs) generated by visitors, with an estimated 2% of tourism's global emissions. As part of UNWTO's ongoing work regarding climate change and tourism, UNWTO stresses the importance of a global approach on Tourism, Aviation and Climate Change.

Fifty one percent of the 880 million international tourists worldwide in 2009 arrived at their destinations by air. In many destinations, particularly those in small islands developing states, in Central and West Africa or in Central and South America, the proportion was much higher. Air transport is thus a key industry in tourism, a sector which generates in many countries a higher contribution of Gross Domestic Product, jobs and investment than most other economic activities; this is particularly the case in developing countries, where tourism is the principal service sector activity.

International air transport has been singled out for separate mitigation treatment, through the International Civil Aviation Organization (ICAO), under the United Nations Framework Convention on Climate Change (UNFCCC) and 2010 will prove a pivotal year for aviation.

Recognizing that the mitigation of GHG emissions from air passenger transport is critical to the sustainable development of tourism, UNWTO will present its Statement Regarding Mitigation of Greenhouse Gas Emissions from Air Passenger Transport to the ICAO Assembly (28 September - 8 October, Montreal, Canada). The Statement underlines the critical role of aviation in tourism, especially in developing countries, outlining a number of principles that should be incorporated into ongoing work on the mitigation of GHG emissions from air transport.

> ***"Air Passenger Transport Is The Major, and Growing, Contributor to Global Greenhouse Gases (GHGs) Generated by Visitors"***

UNWTO cautions against mitigation measures for air transport taken in isolation, without considering the broader tourism framework. It also calls for the application of the UNFCCC principle of Common But Differentiated Responsibilities amongst countries to alleviate negative impacts on tourism in developing countries, where the sector accounts for as much as 45% of the service export earnings All revenues from levies and trading of emissions permits should also yield measurable, reportable and verifiable mitigation results including projects in transport and other tourism-related activities, and financial and other incentives for the earliest possible global introduction of sustainable additional or alternative fuels for air transport.

Tourism has an interest and a responsibility to reduce global emissions, advancing adaptation and mitigation strategies in all tourism industries from air transport to accommodation and other tourism activities. UNWTO has long been working, within the evolving United Nations framework, to develop a long term post Kyoto response to climate change. The Davos Process on Tourism and Climate Change, initiated by UNWTO in 2007, includes firm recommendations and a clear commitment for action to respond to the climate change challenge, requiring the sector inter alia to "mitigate its GHG emission, derived especially from transport and accommodation activities".

UNWTO will disseminate the Statement among the international tourism community and at COP16, and will continue to engage with ICAO and other relevant organizations in seeking to address international aviation emissions at the global level. *cl*

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failed to enact climate legislation, more than half the states have adopted measures requiring utilities to use more renewable energy. To meet those targets, most investment will probably go into solar, wind, nuclear and energy efficiency projects.

Environmental groups are gearing up to challenge coal plants state by state. The Sierra Club is expanding its ranks this year so that 100 full-time staffers will be working on the issue, and the Environmental Defense Fund is hiring additional lawyers to wage battle against coal.

Given the age of the coal fleet, many of the oldest plants also run afoul of clean air guidelines on traditional pollutants.

As a result, the Colorado Public Utilities Commission recently adopted a $1.4 billion plan that will end coal-fired electricity generation in the Denver area. It calls for Xcel Energy to close four coal-fired units in the region, switch another to natural gas and build a new gas-fired plant to help meet federal clean-air standards. The units are all more than 40 years old.

The plan was required under the Colorado Clean Air-Clean Jobs Act, signed by Gov. Bill Ritter in April.

"Coloradans across the state made it clear that they did not want coal in their stockings this year," said Pam Kiely, of Environment Colorado. "The PUC delivered an early Christmas present by deciding to stop burning dirty coal in the metro area."

The Obama administration might also target coal-fired power plants as a way to meet its goals for reducing greenhouse gas emissions. Administration officials have spoken of negotiating guidelines with big utilities, similar to automobile fuel efficiency standards, but utility executives say such talks are not yet taking place. At the Copenhagen climate talks a year ago, the Obama administration pledged a 17 percent reduction in overall U.S. emissions by 2020.

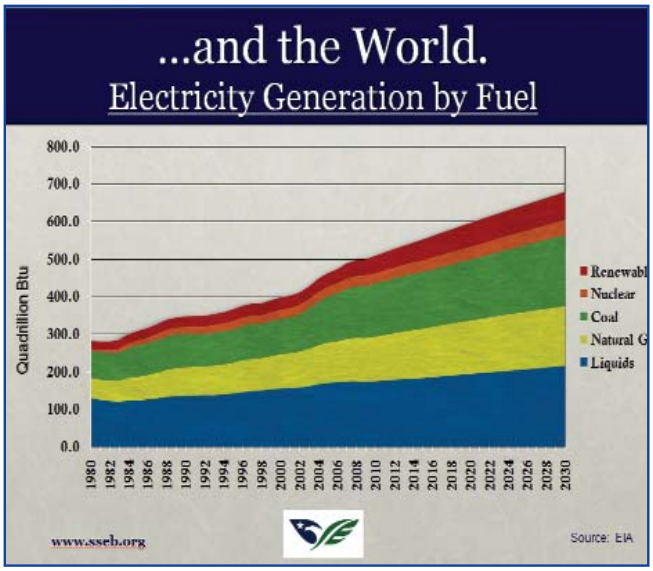
Deutsche Bank predicts coal's share of electric power generation will tumble from 47 percent in 2009 to 34 percent in 2020 and 22 percent in 2030.

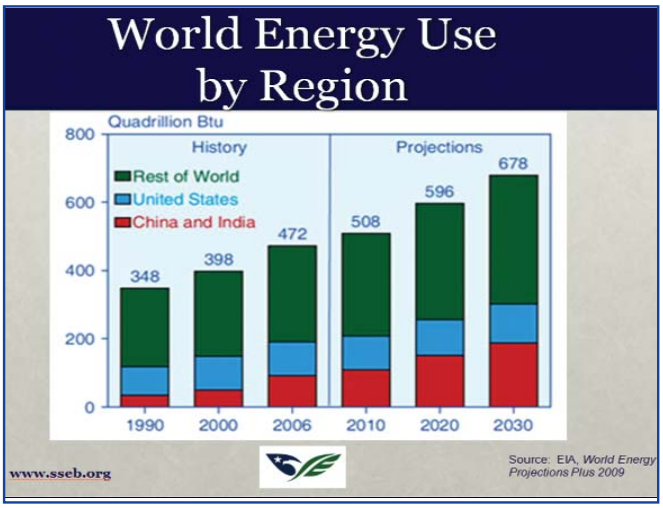
It put it this way in its report: "Based on today's energy fundamentals, the rational economic decision is to shutter inefficient coal plants and replace them with natural gas combined-cycle power plants." *cl*

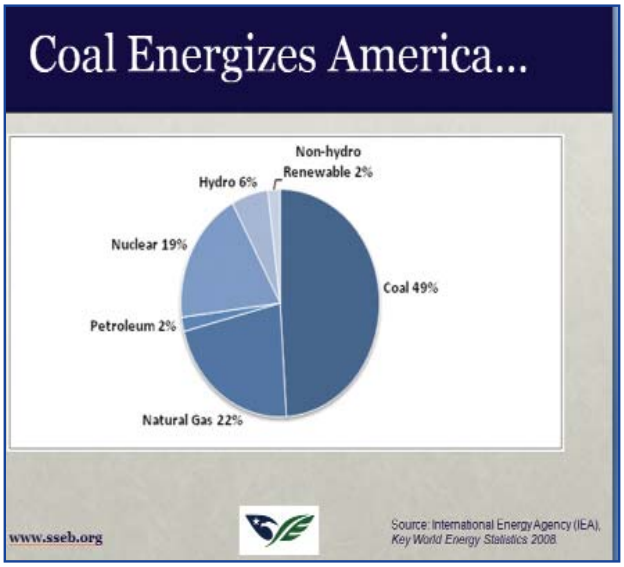
Nemeth Cont. from Page 1

electricity from coal has increased 187 percent. Coal-fired electric generating plants are the cornerstone of America's central power system. Currently, the existing U.S. coal fleet accounts for about half of all electricity generated domestically. Electricity demand is expected to increase dramatically over the next 30 years, and adding new generating capacity typically requires long lead time. In the meantime, the United States will continue to rely on existing plants to provide a substantial amount of affordable electric power for years to come.

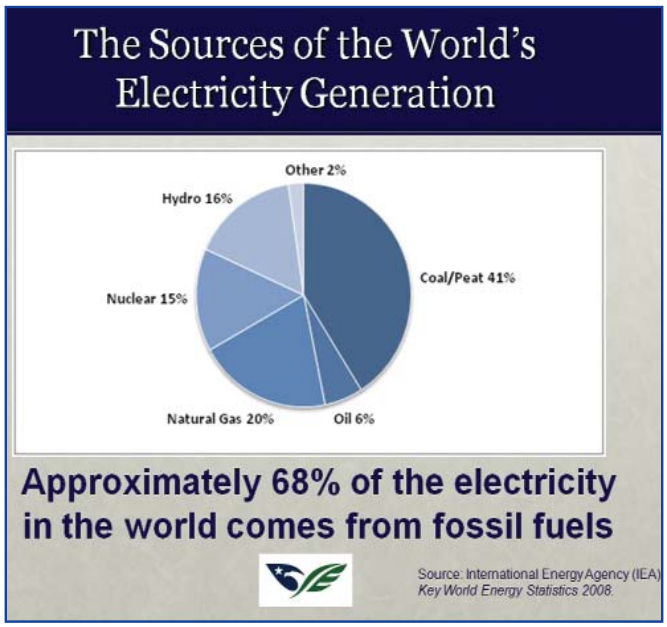
There is vast potential for retrofitting carbon capture technologies to the existing coal fleet. In 2006, coal-fired power plants produced approximately 36 percent of the total U.S. carbon dioxide (CO2) emissions. In addition, over 40 percent of the existing U.S. coal generating capacity is located directly above potential geologic sequestration sites according to the Carbon Sequestration Atlas of the United States and Canada. This includes almost 150 electric generating sites, or nearly one-sixth of the total U.S. CO2 emissions. By retrofitting CO2 capture technologies to coal-fired plants near geologic sinks, billions of tons of CO2 can be permanently stored over the remaining life of the existing fleet. In addition, since very little R&D has historically been devoted to carbon capture systems for existing power plants, there is significant potential to reduce the cost and energy demand of CO2 capture processes through technological advancements.







Nemeth talked about world electricity generation and the fuels that supplied them. He said developing nations need coal. The five largest users of coal are China, United States, India, Japan and Russia, and these countries account for 72 percent of the global coal use. China already uses twice as much coal as the United States and they are currently building a new coal-fueled power plant every week. Coal use in China's electricity sector is expected to increase at five times the rate of coal use in this county. China has the largest build-out of coal-fueled plants in the world. In 2010, 92 GW of coal generation is expected to come on line, requiring 365 million tons of coal annually.



Southern States Energy Board (SSEB) is a non-profit interstate compact organization created in 1960 and established under Public Laws 87-563 and 92-440. The Board's mission is to enhance economic development and the quality of life in the South through innovations in energy and environmental policies, programs and technologies.

Sixteen southern states and two territories comprise the membership of SSEB: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, U.S. Virgin Islands, Virginia and West Virginia. Each jurisdiction is represented by the governor and a legislator from the House and Senate. A governor serves as the chair and legislators serve as vice-chair and treasurer. The Board members include a federal representative appointed by the President of the United States. *cl*

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rich organic shales; and, basalts. Carbon storage in depleted oil and gas reservoirs can also increase oil or gas production, while storage of CO2 in deep saline formations holds the promise of enormous worldwide capacity, with estimates of thousands of gigatonnes of storage.

The selected projects announced today are described below:

• Advanced Resources International, Inc. (Arlington, VA) — In this project investigators will assess factors influencing effective CO2 storage capacity and injectivity in selected Eastern gas shales. Project objectives include analyzing data on reservoir properties; developing a better understanding of the characteristics of shales that impact sealing integrity, storage capacity and CO2 injectivity; verifying this understanding through small-scale CO2 injection tests; characterizing the potential constraints to economic CO2 storage in gas shales; assessing approaches for development of cost-effective CO2 storage; and developing a basin-level characterization of the CO2 storage capacity and injectivity of selected Eastern shales. (DOE share: $1,345,541; Recipient share: $653,500; duration: 24 months)

• Board of Trustees of the Leland Stanford Junior University (Stanford, CA) —Researchers will investigate the feasibility of geologic CO2 sequestration in depleted shale gas reservoirs. Four main focus areas will be studied: physical and chemical aspects of CO2/shale interactions at pore scale; transport processes of critical-state CO2 in hydrofracs, natural fractures, and pores; chemical interactions with groundwater; and trap and seal mechanisms of CO2 in shale gas reservoirs. (DOE share: $1,147,612; Recipient share: $229,522; Duration: 36 months)

• Clemson University (Clemson, SC) — Clemson University researchers will evaluate the feasibility of using wellbore deformations to assess reservoir, caprock, and wellbore conditions. Results will improve the characterization of reservoir and caprock compressibility and pressure-dependent permeability, as well as the distribution of fractures and other heterogeneities in a wide range of reservoir types. It will also improve wellbore characterization, including the bonds between casing, cement and formation. (DOE share: $449,209; Recipient share: $112,292; Duration: 36 months)

• Colorado School of Mines (Golden, CO) — The objective of this project is to improve understanding of CO2-trapping mechanisms affected by formation heterogeneity. The research will focus on capillary and dissolution trapping. Results will lead to a more realistic prediction of storage capacity and leakage risk. (DOE share: $510,752; Recipient share: $139,525; Duration: 36 months)

• Fusion Petroleum Technologies, Inc. (The Woodlands, TX) — This study will evaluate the applicability of the experimental design/response surface method, sensitivity analysis, and optimization method on the many factors that affect the successful characterization, engineering design and operation of a saline formation site. The effects of complex structures such as faults and fractures will be completed. An evaluation of the use of multilateral horizontal wells compared to the use of vertical or single lateral wells will also be examined. (DOE share: $780,185; Recipient share: $195,046; Duration: 18 months)

• Montana State University (Bozeman, MT.) —

"More than 1,100 Years of CO2 Storage Potential in Geologic Formations"

This project will develop a biomineralization-based technology for sealing preferential flow pathways in the vicinity of injection wells. Montana State researchers plan to test a mesoscale high-pressure rock test system, develop biomineralization seal experimental protocol, and create biomineralization seals in different rock types and field conditions. (DOE share: $1,599,385; Recipient share: $399,989; Duration: 36 months)

• New Mexico Institute of Mining and Technology (Socorro, NM) — Researchers will assess caprock/reservoir interfaces of proposed CO2 injection sites. Investigations will focus on depositional, structural, and diagenetic characteristics. Specific topics to be addressed include how physical properties of sand/mudstone interfaces influence CO2 storage and transport, how geochemical perturbations induced by CO2 emplacement influence leakage across the interface, how interface properties affect brine migration into caprock, and how fractures at the interface respond to injection□induced fluid pressure. (DOE share: $399,479; Recipient share: $100,043; Duration: 36 months)

• Paulsson, Inc. (Brea, Calif.) — The objective of this study is to develop a reservoir-assessment tool based on novel and robust borehole seismic technology that can generate ultra high resolution P and S wave images for detailed characterization and precise monitoring of CO2 storage sites. Paulsson investigators will build and test a prototype of a downhole seismic system capable of deploying a thousand 3C downhole receivers using fiber optic geophone technology deployed on drill pipe. The system will be tested at a CO2 storage site. (DOE share: $1,995,682; Recipient share: $636,500; Duration: 24 months)

• The Trustees of Columbia University in the City of New York (New York, NY) —Columbia University researchers will test and evaluate carbon-14 as a reactive tracer to assess CO2 transport in a basaltic storage reservoir. Evaluation of mineral trapping through carbonation will also be completed. Studies will be conducted at the CarbFix CO2 pilot injection site in Iceland. (DOE share: $1,015,180; Recipient share: $346,905; Duration: 36 months)

• The Trustees of Indiana University (Bloomington, Ind.) — Researchers will develop a reservoir-scale multi-phase reactive flow model for CO2 plume migration and dynamic evolution of trapping mechanisms at the Sleipner Project in the North Sea. The model will be calibrated through historical matching using information of the progressive CO2 plume migration delineated by 4D seismic data, then extrapolated to a regional-scale model to predict the CO2 fate 10,000 years post-injection. (DOE share: $401,042; Recipient share: $119,085; Duration: 36 months)

• University of Kansas Center for Research, Inc. (Lawrence, KS) — Investigators will evaluate the effectiveness of the volume curvature seismic tool to assess reservoirs and features such as sags, flexures, and fractures. Analyses will be completed for the Arbuckle saline carbonate formation in Kansas, and confirmed by a well. Facies models and stratigraphic architecture will be used for simulations designed to estimate storage capacity, optimum injection rate, plume migration, containment, and leakage risk. (DOE share: $1,598,536; Recipient share: $401,463; Duration: 36 months)

• University of Texas at Austin (Austin, TX) — Researchers will develop a prototype of a new computational approach to assess plume migration in a reservoir. Based on a Bayesian approach for geological model-selection, it will use injection data and other information and can be integrated with existing flow simulators. This will enable operators and regulators to make more informed decisions about whether to acquire additional data, to

DOE Cont on Page 20

AMR Launches Wireless Monitoring Unit

AMR, Inc has successfully launched its wireless based section monitoring unit (PAD) which interfaces with the MINE NET Tracking and Communication System. Two mining companies have tested these units on active sections and at different test sites underground in the last month. With the success that the PADS demonstrated, AMR will continue to explore expanding the use of wireless technology for tracking mine personnel underground into a completely wireless system.

AMR intends to meet the requirements of the PPL and Miners Act by tracking workers within 200' with the PAD.

For over 30 years, AMR has set the standard in enhancing mine safety and productivity through our exclusive line of products. AMR's tagging, tracking and messaging system is flexible, reliable and attractively-priced.

MineNet™ Features:

• The Active Tag transmits it's ID, ambient temperature, message code, and battery level to the Smart Readers in the Mine Net System. An integrated button provides access to seven canned messages that can be sent to the surface computer.

MSHA approval #23-A070007-0

• The Line Powered Smart Reader provides four antenna ports for tracking or Messenger communications. LED's on the front provide function indications for information and troubleshooting.

MSHA Approval #23-A090013-0

• AMR's Dual Channel Wireless Transceiver functions as an addressable wireless repeater for the Mine Messenger and/or the Smart Tag. The Pad also has two ports for communication and tracking as well.

MSHA approval #23-A100001-0

• AMR has developed an intrinsically safe two-way communication text messaging device based on its Smart Readers, the same readers that control AMR's Tagging and Tracking products through its mine monitoring system.

MSHA Approval #23-A090014-0

Visit www.americanminereserach.com or please feel free to contact AMR at 276-928-1712 for additional information or product questions. cl

DOE Cont. from Page 19

alter injection strategy, or take other action. (DOE share: $1,002,633; Recipient share: $251,247; Duration: 36 months)

• University of Texas at Austin (Austin, TX) — In this project, researchers will complete simulations and experiments to establish proof-of-feasibility of a novel concept for assessing capillary trapping in reservoirs. The outcome of this project will be a geologically grounded method for quantifying the extent of such trapping. (DOE share: $425,345; Recipient share: $109,095; Duration: 24 months)

• University of Wyoming (Laramie, WY.) — Researchers will study the storage of supercritical CO2 and co-contaminants in deep saline formations of Wyoming. The investigation will combine state-of-the-art experimental studies, numerical pore- and reservoir-scale modeling, and high-performance computing to investigate various large-scale storage schemes with the goal of maximizing the permanent trapping of supercritical CO2 and co-contaminants in reservoirs. (DOE share: $1,508,198; Recipient share: $1,374,819; Duration: 36 months).

• Yale University (New Haven, CT.) — Yale University will study basic questions about the chemical and mechanical processes that must occur in basalt reservoirs for carbonation to be practical on a large scale. Experiments will address the question of whether the in situ reaction can sustain itself by generating cracks, or will shut itself down by constricting the pore space. The study is designed to provide a basis for scaling up to future field tests of mineral carbonation in basaltic reservoirs. (DOE share: $1,597,187; Recipient share: $402,715; Duration: 36 months) cl

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Tour of Eastman Coal Gasification Facility for Conference Attendees will be May 23 (Monday) beginning at 11:45 a.m.
The tour will be approximately one hour. **Yes ( ) No ( )**

CONFERENCE REGISTRATION FEES:

Conference Registration includes Reception, Breakfast, Luncheon, Breaks, Conference Materials, and tour of Eastman Coal Gasification Facility. Check the appropriate boxes:

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Electricity Needed for Booth? Yes ( ) No ( )

All exhibits and exhibitors are subject to the regulations and rules established by the Eastern Coal Council (sponsor). Exhibit shall be arranged as not to obstruct the general view or hide another exhibitor. Any pre-built booth MUST be approved by the Eastern Coal Council Expo Committee. The sponsor will not be liable for loss or damage to the property of the exhibitor or his representatives or employees from theft, fire, accident, or there cause. However, exhibit area will be locked when not in use. The Sponsor will not be liable for injury to exhibitors, their employees, or third persons, which claims for damages, injuries, etc., may be incident to or arise from, or be in any way connected with their use of occupation of display space. The exhibitor shall indemnify the sponsor for any costs or expense, exclusive of counsel fees, arising from any such claim. Exhibitors shall, at no cost to the sponsor, obtain adequate and reasonable liability and property damage insurance from responsible insurance companies. The exhibitor assumes all responsibility for compliance with local, state, and federal ordinances, laws and regulations covering fire, safety and health, and all rules and regulations of the Meadowview Conference Resort & Convention Center. PAYMENT IN FULL for all booths must be made by May 1, 2011. For additional information contact Eastern Coal Council.

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Coal Leader Product News

Joy Shuttle Car

The role of haulage equipment is to efficiently remove the cut material from the working face in such a manner so as to enhance the performance of the continuous miner and maximize the productivity of the overall section. Joy fully understands this role and proactively works with the mining industry to provide comprehensive "system" solutions to suit individual application needs.

Since the introduction of our first shuttle car in 1938, JOY shuttle cars continue to be the mainstay of the industry for batch haulage vehicles. Their exceptional reliability, low operating cost and sustained high levels of productivity are unmatched. Through the extensive use of sophisticated computer-aided design systems, JOY shuttle cars continue to develop, evolve and improve.

Underground mines are tough places for haulage vehicles to operate – JOY shuttle cars are designed to meet the challenge. Every element of a JOY shuttle car is engineered to balance performance and efficiency. JOY shuttle cars have a heavy-duty, high-power drive train that enables them to haul loads in extremely arduous conditions. The permanent four-wheel drive system is powered by two 85kW VFD AC traction motors (50kW in lower seam models). Wheel units have been upgraded to be more robust and durable and the cast pivot axles are virtually indestructible. A four-wheel independent suspension system is also available to help maintain higher tram speeds and improve the operator's comfort in uneven and/or broken roadways.

The JOY shuttle car chassis and rolling gear are designed using Finite Element Analysis (FEA) techniques to find the optimal balance of volumetric load, vehicle dimensions, load-carrying ability and fatigue life. Heavy-duty conveyor reducers and abrasion-resistance conveyor decking further improve reliability and durability. With over 80 units in the field today, JOY shuttle cars are available with an optional remote control system. Remote control permits deeper cuts as the shuttle car, now unmanned, can follow the miner under unsupported roof. This significantly improves the overall productivity of a room and pillar section.

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Atlas Copco's Minetruck MT42 Next Generation Underground Trucks

A high speed 42-ton articulated truck, the MT42 has been designed for maximum productivity, increased safety and operator comfort.

The Minetruck MT42 is powered by a 520-hp EPA Tier 3/Stage IIIA Cummins QSX15. The fuel efficient, low-emission engine, coupled with proven drivetrain components, delivers reliable performance and high speed on ramps. The transmission has eight forward and two reverse gears and features a self-diagnostic system for rapid troubleshooting. A service bay on the side of the truck allows easy access to filters, valve blocks and service points for daily maintenance, and the cabin can be hydraulically tilted to expose the engine bay.

Operator comforts in the standard ISO ROPS/FOPS certified cabin include an air suspended forward-facing seat; a clear, multifunction display monitor; air conditioning; and a trainer's Rear facing cameras – one backup camera and one loading camera covering the box – increase the operator's view from the cabin.

The articulated steering increases maneuverability and allows agile cornering, while the dump system can discharge a full load in just 13 seconds. Front axle suspension further contributes to operator comfort, while also allowing greater speeds on mine roadways. The truck's brakes are spring applied, hydraulic released (SAHR) – the safest in the industry. SAHR brakes eliminate the need for a separate parking brake, are low maintenance and provide extended service life.

"The Minetruck MT42 has safety and performance features that will be very attractive to our customers.

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Jennmar Offers Advanced Ground Control Engineering

Keystone Mining Services is the engineering affiliate company of Jennmar Corporation that oversees research and development. KMS conducts extensive ground control engineering for Jennmar.

KMS has made improvements to its computer modeling packages, including primary and supplemental bolting, pillar design, optimum longwall orientation and mining sequence, and seam interaction stresses.

The ultimate goal of Keystone Mining Services and Jennmar is to utilize existing and new products and advanced ground control engineering to improve mine safety and productivity.

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Bucyrus VAST™ Shovel Simulator Delivers Cost Effective Operator Training!

Bucyrus International, Inc. announced the introduction of the new VAST™ System (Value Added Simulation Training) specifically for Bucyrus electric mining shovels. VAST™ is designed to reduce training costs, increase productivity, and improve training effectiveness. Studies have shown that new operators who receive training with VAST™ prior to field training consistently maintain a higher level of productivity that those who do not receive simulator training. The VAST system has a low cost to purchase and operate; all that is needed is the VAST software, an updated Windows based PC, a monitor, and two joysticks.

VAST™ gives an introduction to the basics of safe, productive shovel operation and also serves as refresher training for more seasoned operators. Simulator users are placed at the controls of a Bucyrus shovel in a virtual mine and interact with a simulated haul truck. The VAST™ system contains a total of 8 different training modules including:

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Cat® 994F Wheel Loader Now Offers Extended High Lift Option

The new Extended High Lift Option for the Cat® 994F Wheel Loader enables the popular mining machine to load Cat 793 and similarly sized trucks more efficiently. The Extended High Lift (EHL) linkage provides 42 inches (1075 mm) more dump clearance compared to the High Lift linkage.

The additional lift height makes it easier for the operator to load a 250-ton size class truck. For faster cycle times, the operator can back the 994F away from the truck without racking back the bucket. The additional lift also enables the operator to dump the last pass without pushing material. Centering the load, for reduced truck wear, better truck handling and less spillage, is easier, too.

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Continuous Haulage System
Highwall Miner, Crawler-Veyor

Crawler-Veyor is a reliable single operator continuous haulage mining system for underground or highwall mining for seams as low as 29" (737mm).. The system is very safe, and can be any length up to 1,500' (450m). Applications include thin seam, steep slope mining, room and pillar, shortwall, and longwall panel development.

Crawler-Veyor Advantages:

Single operator. Reliable continuous haulage system. Mines seams as low as 29" (737mm).
Highwall Mining. Underground Mining: Room and Pillar, Longwall Panel Development, Shortwall Mining.
Narrow-only 66" (1676mm) in width. Easily and very safe to operate due to constrained path of movement.
Easily negotiates steep or rolling conditions and poor travel ways.
May be intergrated with any continuous miner.
Equipped with a variable speed synchronous motor system to fine tune performance to mining conditions.
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Miner's Helper Articulated Manipulator
Adaptable to virtually any vehicle for stability.

*** Lateral Sliding Base- 1,300 lbs. 60" wide consists of two slide sections with 24" travel for each section.**
*** 3 Function Crane- 350 degrees rotation.**
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