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President Requests \$760.4 Million for Fossil Energy Programs

President Obama's FY 2011 recently announced budget seeks \$760.4 million for the Office of Fossil Energy (FE) to support improved energy security and rapid development of climate-oriented technology. The request includes \$586.6 million for Fossil Energy Research and Development, \$138.9 million for the Strategic Petroleum Reserve, \$11.3 million for the Northeast Heating Oil Reserve and \$23.6 million for the Naval Petroleum Reserves.

The FY 2011 budget request will allow FE to fulfill its mission: to provide the nation with the best opportunity to tap the full potential of its abundant fossil energy resources in an environmentally sound and affordable manner; and to ensure America's readiness to respond to short-term energy supply disruptions.

FOSSIL ENERGY R&D

The Fossil Energy Research and Development (FE R&D) FY 2011 budget request of \$586.5 million represents more than 75 percent of FE's total FY 2011 budget request. It is comprised of the Fuels and Power Systems program. This program is designed to ensure that we can continue to use the nation's abundant fossil resources in a way that will benefit our environment and our economy for years to come.

Advancing Coal Toward a Low-Carbon Future Fuels and Power Systems.

The FY 2011 budget request for FE's Fuels and Power Systems program is \$403.9 million. Initiatives will focus on research, development, and deployment of technologies to use fossil fuels more cleanly

and efficiently. The core research and development (R&D) efforts of the Fuels and Power Systems program focus on: the creation of a portfolio of technologies that can capture and permanently store carbon dioxide (CO₂) from power plants and industrial processes; carbon capture for existing coal-fired power plants; efficiency improvements for existing and new power generation, such as: improved gasification technologies, coal-to-hydrogen conversion, development of stationary power fuel cells, and improved turbines for future coal-based combined cycle plants.

The Fuels and Power Systems program also supports a robust demonstration program, which includes the Clean Coal Power Initiative (CCPI) and FutureGen programs.

Carbon Sequestration

The Department of Energy is requesting \$143.0 million for FE's Carbon Sequestration program. By developing technologies to decrease the release of CO₂ into the atmosphere, we can continue to use our extensive domestic fossil energy resources while reducing the impacts on global climate change. Carbon capture and storage (CCS) will play a central role in fossil fuels remaining a viable energy source for our nation. CCS is the primary pathway that DOE



President Obama

is pursuing to allow continued use of fossil fuels in a carbon-constrained future.

Essential to these objectives are the Regional Carbon Sequestration Partnerships (RCSPs), which unite public and private entities in an effort to complete and evaluate small- and large-scale CO₂ injection tests across the nation with the aim of developing best practices and supporting the regulatory development process.

In FY 2011, several of the nine large-scale RCSP CO₂ injection projects will be injecting CO₂ for large volume (1 million tons/year) geologic storage tests. Most of the large-scale field tests will have completed the first stage of the projects consisting of site selection and characterization, NEPA, pre-injection monitoring, and permitting. One proj-

ect will have concluded its injection of 1 million tons of CO₂ by FY 2011, and will be conducting post injection monitoring at the site.

Additionally, U.S. engagement and collaboration with the global community will continue through FE's participation in the Carbon Sequestration Leadership Forum, the U.S.-China Clean Energy Research Center, and other international initiatives.

Innovations for Existing Plants (IEP)

The FY 2011 budget request for the IEP program is \$65.0 million. The IEP program is focused on developing post-combustion CO₂ retrofit capture technology. Post-combustion CO₂ capture technology can be used in pulverized coal power plants, which is the industry standard for coal-fueled electricity generation.

Advanced Integrated Gasification Combined Cycle (IGCC)

DOE is requesting \$55.0 million in FY 2011 for the IGCC program. The IGCC program is developing advanced gasification-based technologies to: reduce the cost of near-zero emissions (including CO₂) coal-based IGCC plants; improve thermal efficiency; and achieve near-zero atmospheric emissions of all pollutants, including CO₂, sulfur dioxide, nitrogen oxides, acid gases, and mercury.

Fuels

The FY 2011 budget request for the Fuels program is \$12.0

million. In FY 2011, activities include continued support for the bench-scale development of hydrogen separation technologies and components.

Fuel Cells

The FY 2011 budget request for the Fuel Cells program is \$50.0 million. The Fuel Cells activity will continue to increase reliability of the Solid State Energy Conversion Alliance (SECA) fuel cell technology and provide the technology base to permit continued improvement to low cost, MW class, ultra-clean, with up to 60 percent electrical efficiencies for central power generation, and fuel cells for distributed generation applications.

Advanced Turbines

In FY 2011, the Advanced Turbines program will continue projects to develop efficient, clean, and cost-effective hydrogen fueled turbines for coal-based IGCC power systems that capture and sequester carbon dioxide. DOE is requesting \$31.0 million for this activity in FY 2011.

Advanced Research

The Advanced Research program bridges basic and applied research to help reduce the costs of advanced coal and power systems while improving efficiency and environmental performance. The proposed \$47.9 million budget for Advanced Research will fund advanced materials research and projects for ultra-supercritical steam cycles for power generation aimed at a greater understanding of the physical, chemical, biological, and thermo-dynamic barriers that currently limit the use of coal and other fossil fuels.

Editorial

Former Senator Schmitt Faults Motivations - Climate Legislation, Loan Guarantees, & Regulation

Americans should think long and hard about their children's future before giving up liberties and incomes to politicians in Washington and at the United Nations in the name of "doing something" about climate change.

Given how little we actually know about climate, as well as great uncertainties in what we do know, the President, regulators, and Congress have chosen an extraordinarily dangerous path of unconstitutional usurpation of the rights of the people and the constitutionally reserved powers of the States.

Climate change assumptions rather than facts, and computer modeling rather than real-world observations, underpin the Government's efforts to restrict American liberties and confiscate trillions of dollars of American income.

The scientific rationale behind this proposed massive intrusion into American life requires more than a "consensus" of like-minded climate analysts and bureaucrats. It needs to be right.

Recent disclosures and admissions of scientific misconduct by the United Nations and advocates of the human-caused global warming hypothesis shows the fraudulent foundation of this much-ballyhooed, but non-existent scientific consensus about climate.

Still, the Environmental Protection Agency, the Department of Energy, the Securities and Exchange Commission, and other Government agencies persist in over-stepping their regulatory authority to jam climate related requirements into our lives and economy at the expense of liberty, jobs, and incomes. Federal control of energy production and use, advocated by special "climate"

interests, will have a vanishingly small effect on slowing three and a half centuries of very slow, erratic, but natural global warming.

Prudent protection of local environments by the States and the people has justification in the 9th Amendment's protection of natural rights, including "Life, Liberty and the Pursuit of Happiness" as formalized in the Declaration of Independence. Further, the 10th Amendment leaves to the States all governance responsibility for environment as no direct or indirect mention of it exists in the Constitution.

A long-term federal and commercial agenda to gather power and profit in the name of "environment" at the expense of liberty, therefore, has no moral or constitutional foundation. Only research on climate and other aspects of the earth sciences and engineering find justification in the Constitution by virtue of the Article I, Section 8, Clause 8, power given to Congress to "promote the Progress of Science and the useful Arts."

The constitutional relationship between climate-related taxation and regulation, on the one hand, and national security and economic health, on the other, demands close examination. Meeting the constitutional requirement in the Preamble and Articles I to "provide for the common Defence and the general Welfare" requires a strong economy and ready access to abundant energy.

Efforts to unconstitutionally limit energy production and tax carbon emissions would clearly adversely affect the economy and thereby limit the Nation's ability to counter potential adversaries or direct attacks. The President and Congress already have intentionally and aggressively weakened

the nation's economy and undermined the general welfare by focusing recession recovery on deficit spending, a weak dollar, more heavy-handed regulations, and future tax increases. A carbon emissions cap and tax on energy production and use further jeopardizes the economy and our ability to respond to security threats or to add new jobs.

Trying to "do something" about the current slow, long-term warming in Earth-surface temperatures will not work against natural climate forces.

When Americans realize what liberties have been lost in this unconstitutional power grab, we will deeply regret that we did not just prepare for natural climate change rather than trying to stop the unstoppable. Our focus should be on producing more energy to maintain economic growth, to raise worldwide living standards and, where necessary, deal with the actual effects of natural climate change whether warming or cooling. We should never limit growth in energy use with its associated improvements in human conditions and standards of living.

Critical differences in scientific approach exist between scientists who observe weather and climate and those who attempt to model nature's complexities in computers. Those who observe the natural, economic, and sociological aspects of climate change are "realists."

Too many modelers, on the other hand, have become office-bound "tinkerers" who believe complex mathematics and parameter tweaking can accurately forecast long-term changes in climate - Earth's most complex natural system. Many of tinkerers also have let ideological emotions and advocacy cloud their scientific objectivity.

Observations of natural variations in atmospheric and oceanic temperatures, gas concentrations, and currents only provide clear indications of how, but not when, climate will change. Historical and geological records illustrate the high levels of uncertainty in any forecast of either the direction or the timing of future climate trends.

Climate forecasts based on computer models have proven to be unsuccessful due to the great number and great complexity of critical variables, some of which, like the effects of water vapor and clouds, so far defy mathematical definition. Little wonder that climate models fail, both in replication of past conditions and in fore-

casting the future.

Computer models of global climate just do not work. For example, the models' unanimous predictions do not match actual measurements of temperatures in the troposphere (lower 0-18 miles of the atmosphere, depending on latitude). According to the models, the troposphere should have warmed significantly in response to rising levels of atmospheric carbon dioxide. On the contrary, the troposphere has remained little changed during the last 50 years during which satellite and balloon-borne measurements of temperature and continuous direct measurement of carbon dioxide levels became available.

Models cannot truly deal with the realities of weather, that is, evaporation, convection, clouds, rain, wind variations, ocean heat storage and currents, and all the other pathways in which nature inexorably moves heat from warm regions to cold.

So, what should we do now about climate change, if anything? We must prepare to adapt to inevitable change, however unpredictable it may seem.

We can recognize that production and use of our own domestic oil, gas, coal, and nuclear resources buys us time to meet these challenges and, at the same time, preserve our liberty. We can develop far better surface and space observational techniques and use them consistently over decades to better understand the science of our Earth.

On political time scales, we can quit taking actions with unknown unintended consequences. We can choose sustained research and development of energy alternatives, those with clear paths to commercialization, rather than continue tax dollar subsidies and loan guarantees for premature or flawed introduction of politically motivated concepts. We can provide investment and business environments that will mature new sources of energy, particularly through reduction of personal and business income tax rates.

Instead, the President now proposes loan guarantees, rather than regulatory and legal reform, to add more nuclear power to the 20% currently meeting electrical power demand in the United States. His proposal for the Government to guarantee \$8.33 billion in loans, allegedly to encourage a single power company (Southern) to build two nuclear fission plants, reflects cynical manipulation of the facts.

First of all, such a proposal and targeted loan guarantees in general are unconstitutional, violating the equal protection rights of other Americans provided by the 5th and 14th Amendments.

Secondly, the proposal can always be withdrawn and does not include an elimination of those unnecessary regulations, judicial reviews, and barriers to nuclear waste disposal or reprocessing that make raising private capital for nuclear plants essentially impossible.

Thirdly, the President hopes that his proposal, whether or not ever consummated, will garner support for similar loan guarantees to otherwise uneconomic wind, solar energy, and biofuel plants and for passage of unworkable and scientifically invalid climate change legislation.

Fourth, the proposal would give the Government, once again, effective financial control of another segment of the American economy while distorting competition, capital markets, and good business practice.

Finally, Government loan guarantees ultimately constitute a liability held by the American taxpayer. Don't we have enough of such liabilities already?

In addition to regulatory and legal reform to encourage private investment in nuclear power, the Government should help research institutions and industry develop nuclear waste reprocessing and/or reuse technology, terminated under the Carter Administration.

Also, such cooperative research and technology development efforts should advance the capability to transform unusable portions of nuclear waste into stable or short-lived radioisotopes, using advance fusion processes. This type of Government support at least would be constitutional as promoting "Science and the useful Arts," an enumerated power of Congress under Article I.

Instead of being ideologically greedy and ignoring good science and economics, we can start being wise and truly concerned about our children and their children and the society in which they will live. That concern needs to be manifested in the 2010 election of a new Congress.

Harrison H. Schmitt is a former United States Republican Senator from New Mexico as well as a geologist and former Apollo Astronaut. He currently is an aerospace and private enterprise consultant and a member of the new Committee of Correspondence.

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AL Injection Project Aimed at Enhanced Oil Recovery and Testing Important Geologic CO₂ Storage

Carbon dioxide (CO₂) injection is an important part of carbon capture and storage (CCS) technology, and is underway as part of a pilot study of CO₂ enhanced oil recovery (EOR) in the Citronelle Field of Mobile County, Alabama. A project team led by the University of Alabama at Birmingham is conducting the injection. Study results of the 7,500-ton CO₂ injection will provide estimates of oil yields from EOR and CO₂ storage capacity in depleted oil reservoirs.

In the United States, CO₂ injection has already helped recover nearly 1.5 billion barrels of oil from mature oil fields, yet the technology has not been deployed widely. It is estimated that nearly 400 billion barrels of oil still remain trapped in the ground. Funded through the Department of Energy's Office of Fossil Energy, the primary goal of the

Citronelle Project is to demonstrate that remaining oil can be economically produced using CO₂-EOR technology in untested areas of the United States, thereby reducing dependency on oil imports, providing domestic jobs, and preventing the release of CO₂ into the atmosphere.

The Citronelle Field appears to be an ideal site for concurrent CO₂ storage and EOR. The field is composed of sandstone reservoirs in a simple structural dome, and has existing infrastructure that includes deep wells. When the 5-month injection is completed, incremental oil recovery is anticipated to be 60 percent greater than that of conventional secondary oil recovery by water flood.

A recent study by Advanced Resources International of Arlington, Va., estimates that approximately 64 million addi-

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tional barrels of oil could be recovered from the Citronelle Field by using this tertiary recovery method.

The geologic structure and lack of faulting also make the field naturally stable for CO₂ storage. Once the oil has been recovered, the remaining storage capacity of the depleted oil

reservoirs and saline formations in the Citronelle Dome is estimated to be between 0.5 and 2 billion tons of CO₂. Southern Company of Birmingham, AL., is evaluating the potential of the reservoirs as permanent storage sites for CO₂ produced from fossil fuel combustion in power plants.

A successful demonstration at the Citronelle Field could offer new opportunities to introduce the latest CO₂-EOR and carbon storage technologies to the commercial market.

The Citronelle project is currently in its second phase, which includes injection, associated validation of models, and determination of oil-CO₂ mixture properties. Containment of CO₂ at the test site will also be monitored in the ambient air, soil, and vegetation. During phase I, the project focused on selection of the test site, analysis of the site

geology, and study of back-ground conditions.

The SENSOR® reservoir simulator, which is a generalized 3D numerical model used to optimize oil and gas recovery processes was used to determine the amount of CO₂ required for a successful demonstration and the effect of CO₂ on oil production within the project time frame.

Project performers include the University of Alabama at Birmingham (Birmingham, AL), Alabama Agricultural and Mechanical University (Normal, AL.), Denbury Resources Inc. (Plano, TX), the Geological Survey of Alabama (Tuscaloosa, AL.), Southern Company, (Birmingham, AL.), the University of Alabama (Tuscaloosa, AL.), and the University of North Carolina at Charlotte (Charlotte, NC).

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President's Request Cont from Page 1

In FY 2011, a multi-lab partnership will develop a comprehensive, integrated suite of computational models for accelerating the development of carbon capture technologies. The scientific underpinnings of the suite of models will ensure that learning from successive generations of a technology or learning from even competing technologies is maximized.

The simulation-based confidence will reduce the risk in incorporating multiple innovative technologies in a design, thereby significantly reducing the development cycle required to move novel technologies to commercialization.

Clean Coal Power Initiative

No funding is being requested for the CCPI program in FY 2011. In FY 2011, FE will focus on project execution in all Rounds of CCPI, and completion of National Environmental Policy Act procedures for ongoing projects.

FutureGen

No new funding is being requested for the FutureGen program in FY 2011.

Tapping the Nation's Unconventional Natural Gas Resources

FE's Natural Gas Technologies and Oil Technology programs continue to focus on science and technology to find and produce oil and gas from non-conventional reservoirs and reduce the environmental impact of resource development.

Natural Gas Technologies

The Natural Gas Technologies program develops technologies to explore the recovery potential of natural gas from methane hydrate resources and their potential environmental impacts. In FY 2011, the Office of Science will initiate a new research program in gas hydrates. Therefore, no funding is requested in the Fossil Energy budget.

Petroleum Oil Technology

Consistent with the President's policy to not fund government R&D for oil technology, there is no funding requested for the Oil Technology program in FY

2011.

Petroleum Reserves

FE's Office of Petroleum Reserves manages programs that provide the United States with strategic and economic protection against disruptions in oil supplies. These include the Strategic Petroleum Reserve, the Northeast Home Heating Oil Reserve, and the Naval Petroleum and Oil Shale Reserves.

Strategic Petroleum Reserve

The Strategic Petroleum Reserve (SPR) provides strategic and economic security against disruptions in oil supplies with an emergency stockpile of crude oil. The SPR is currently filled to capacity at 727 million barrels of crude oil in inventory.

The FY 2011 budget request of \$138.9 million for SPR is a decrease from FY 2010 funding. The decrease assumes a one-time cancellation of \$71 million in balances from prior year appropriations for a 1 billion barrel expansion at the Richton, MS., site and the use of these balances to partially

fund the \$209.9 million operations and management activities of the SPR.

FY 2011 funding initiates activities to integrate into site operations the Bayou Choctaw replacement cavern, planned for purchase with FY 2010 appropriations.

Additionally, FY 2011 provides for the assessment of energy efficiency and greenhouse gas (GHG) control at SPR facilities toward meeting the DOE goal to lower GHG emissions at all DOE facilities.

Northeast Home Heating Oil Reserve

The Northeast Home Heating Oil Reserve, which was established in 2000, is capable of assuring a short-term supplement to private home heating oil supplies during times of very low inventories or in the event of significant threats to immediate energy supplies.

The two million barrel Reserve protects the Northeast against a supply disruption for up to 10 days, the time required for ships to carry heat-

ing oil from the Gulf of Mexico to New York Harbor.

The FY 2011 budget request of \$11.3 million continues operation of the Reserve, including lease of commercial storage space and funding for the award of new storage contracts in FY 2011.

Naval Petroleum and Oil Shale Reserves

Today, three of the four original Naval Petroleum Reserves (NPR-1, NPR-2, and NPR-4) have been sold or transferred to the Department of the Interior.

The only remaining oil reserve managed by the DOE is the Teapot Dome field (NPR-3) in Casper, Wyo., which is now a stripper field that also serves as an oilfield technology testing center (Rocky Mountain Oilfield Testing Center).

The FY 2011 budget request for this program is \$23.6 million, which will fund the environmental remediation of NPR-1 and operations for NPR-3.

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Coal Leader Coal Industry News

Arch Coal's Jacob Hatch Selected Young Engineer of the Year by SOME

Arch Coal, Inc. (NYSE: ACI) announced that Jacob Hatch, an employee of Arch subsidiary Canyon Fuel Company, has earned the 2009 J.W. Woomer Award as Young Engineer of the Year by the Society of Mining Engineers.

Hatch is an electrical engineer with Canyon Fuel Company's Sufco Mine near Salina, Utah. He played an important role in improving the underground mine monitoring system, as well as working on improving the overall mine power system.

"Jacob is making a positive difference very early in his career," said Gene DiClaudio, president of Arch Western

Bituminous Group. "Jacob represents the type of employee we want to recruit - smart, passionate and not afraid to stretch."

"Jacob takes every opportunity to give us his best," said Ken May, general manager of Sufco mine located near Salina, Utah. "We expect more great things from Jacob as his career progresses."

Hatch earned a bachelor of science degree in electrical engineering from Utah State University. Prior to joining Canyon Fuel Company in 2007, Hatch worked as an intern for Rocky Mountain Power and Canyon Fuel Company's Sufco mine.

"I am honored and humbled to be chosen for this award," said Hatch. "The opportunity to be involved in projects that vary from mine communication

networks to power distribution systems so early in my career has been a great experience. I look forward to the challenges and opportunities for continued growth in the future. I feel lucky to have such a fast-paced and exciting work environment."

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Peabody Energy's Wilpinjong Mine Ships First Coal to Newcastle Coal Infrastructure Group (NCIG) Export Terminal

The world's largest private-sector coal company has shipped the first coal to the newly constructed 30 million tonne-per-year NCIG export terminal in Newcastle, Australia. The coal was delivered from Peabody's highly productive and low-cost

Wilpinjong surface mine in New South Wales. The terminal is set to begin exports in April.

"NCIG is perfectly timed to increase throughput as Australia continues to set export records," said Peabody Executive Vice President and Chief Operating Officer Eric Ford. "These volumes are vital for consumers in Pacific Rim nations that have growing needs for quality coal. Asian nations are forecast to account for more than 90 percent of global coal demand growth in the next two decades. We're pleased Peabody could be part of a history-making event for Australia's coal industry."

Peabody is investing in a major capital program to expand its Australia metallurgical and thermal platform and is set to nearly double export vol-

umes by 2014. Peabody has the second-largest interest in the NCIG terminal and long-term expansion plans at NCIG ultimately will increase terminal throughput to 66 million tonnes per year.

Peabody Energy (NYSE: BTU) had 2009 sales of 244 million tons and \$6 billion in revenues. Peabody owns nine metallurgical and thermal mines in Queensland and New South Wales that last year shipped 22.3 million tons of coal. Peabody's coal products fuel 10 percent of all U.S. electricity generation and 2 percent of worldwide electricity.

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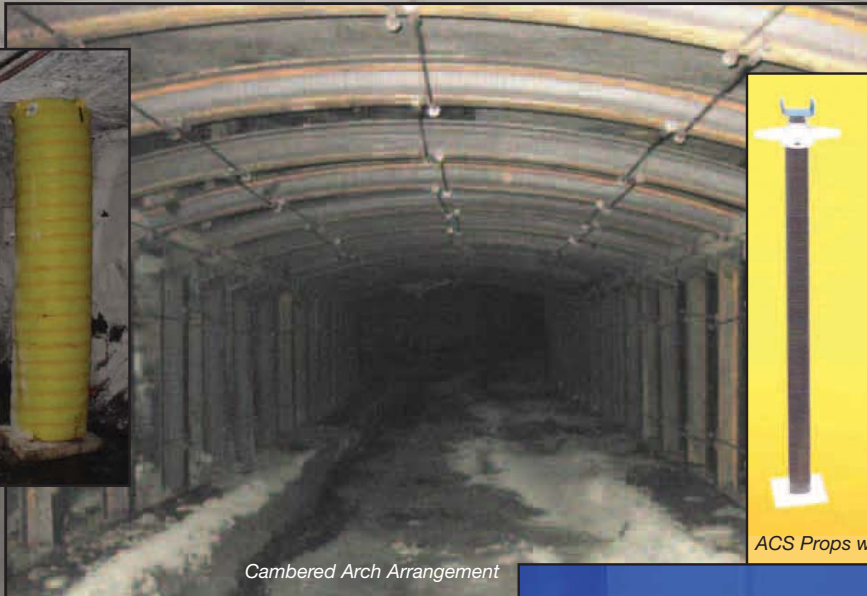


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Bucyrus International, Inc. Completes Acquisition of Mining Business of Terex Corporation

Bucyrus International, Inc. (Nasdaq:BUCY), a world leader in the design and manufacture of mining equipment, announced recently that it has completed its acquisition of the mining equipment business of Terex Corporation.

The transaction will position Bucyrus as the premier supplier of mining equipment, serving its customers from nearly 100 locations around the world with a team approaching 10,000 employees.

"We are pleased to announce this important milestone for Bucyrus as we begin our 130th year in business. This transaction is a unique opportunity to build an even



Tim Sullivan

President and Chief Executive Officer of Bucyrus.

In connection with the acquisition, Bucyrus paid US\$1 billion in cash and issued to Terex 5,809,731 shares of Bucyrus common stock. The number of shares was determined by dividing US\$300 million by the trade weighted average share price of Bucyrus for a ten day period prior to signing the agreement on December 20, 2009. Bucyrus amended its existing credit agreement and raised additional term debt of \$1 billion to fund the cash payment.

Bucyrus now offers a comprehensive product line of mining equipment driven by technology, quality, and first class service. Bucyrus designs and manufactures world class machines and provides unpar-

*Acquisition
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Supplier*

alleled aftermarket support throughout the life of its equipment. With the completion of this transaction, Bucyrus has extended the organization's geographic footprint, diversified its product portfolio and positioned the company as a more globally competitive organization. Bucyrus doubles its addressable market from roughly US\$15 billion to over US\$30 billion.

"This transaction is a natural extension of our current operations; we're one company with a proud history powered by hard-working, loyal employees who are passionate about mining," Sullivan said. "We've reinforced our long-held values of safety, customer focus and reliability at work."

Bucyrus' portfolio now consists of walking draglines, electric rope shovels, the world's largest hydraulic excavators, off-the-highway haul trucks, highwall miners, underground longwall systems, room and pillar mining systems and transport machinery and a full line of drills and belt systems for all mining applications. Bucyrus' unmatched suite of surface and underground mining equipment is paired with its superior parts, consumable products and aftermarket support throughout the world.

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 in mining minerals such as potash and trona.

In addition to machine manufacturing, Bucyrus manufactures high quality OE parts and provides world-class support services for their machines. Bucyrus' corporate headquarters is located in South Milwaukee, WI USA. *d*

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Arch's Coal Robert Shanklin Awarded Prestigious Eisenhower Fellowship

Eisenhower Fellowships is pleased to announce the selection of Arch Coal's Robert Shanklin as a 2010 St. Louis Eisenhower Fellow. During his six-week fellowship to Australia and China, Shanklin will cultivate new technical and executive contacts in the energy industry as he builds a stronger technical and commercial knowledge base.

As Vice President of Coal Technology at Arch Coal, Shanklin focuses on researching, developing and investing in technologies to identify ways to use our world's natural resources in a safer, cleaner and more efficient manner. He is charged with taking the innovations being developed at universities, national research labs and entrepreneurial ventures and infusing business strategy and capital in a way

that provides for a pathway to commercialization. Shanklin currently oversees Arch's investment in coal-related technologies, including a proposed coal-to-gasoline conversion facility in Wyoming.

Shanklin, a graduate of Kansas State University and University of Missouri, was selected after a competitive interview and selection process by the Eisenhower Fellowships Selection Committee, which is comprised of leaders in the St. Louis community, including former McDonnell-Douglas/ Boeing CEO John McDonnell and Chancellor Mark Wrighton of Washington University in St. Louis.

Shanklin joins an impressive international network of former Eisenhower Fellows, including Missouri State Treasurer Clint



Robert Shanklin

Zweifel and Sr. Vice President, Corporate Planning and Risk Management at Ameren Corporation Michael Moehn.

As an Eisenhower Fellow, Shanklin will travel on an intensive four-week individualized professional program to

Australia and a two-week program to China where his perspectives and contacts will be enriched through professional meetings with national government officials, university researchers, policy experts, and business leaders in the fields of coal, energy use and climate change.

"This is a great opportunity for Robert to gain a deeper understanding of international energy issues and initiatives," says Arch's Vice President of Business Development David Peugh. "Robert will further develop his expertise in identifying new energy technologies and markets through his participation in the prestigious Eisenhower Fellowship program."

Eisenhower Fellowships is a private, non-profit, non-partisan organization seeking to

foster international understanding and leadership through the exchange of information, ideas and perspectives among emerging leaders throughout the world. Established in 1953 as a birthday tribute to President Dwight D. Eisenhower, the organization has sponsored more than 1700 Fellows from 108 countries. The chairman of Eisenhower Fellowships is General Colin L. Powell, USA (Retired); former President George H.W. Bush is honorary chairman.

St. Louis-based Arch Coal, Inc. (NYSE: ACI) is the second largest U.S. coal producer. Through its national network of mines, Arch supplies cleaner-burning, low-sulfur coal to fuel roughly 8 percent of the nation's electricity. *al*

Ground Control Technology for the Mining and Tunneling Industry



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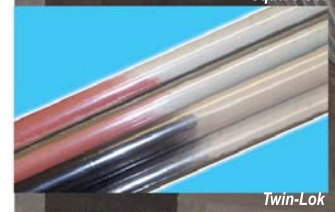
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Alpha Natural Resources Announces Safety Milestones

Alpha Natural Resources (NYSE: ANR), a leading U.S. coal producer, recently announced 2009 safety milestones, including several prestigious safety honors received in West Virginia and an overall safety performance for all of its affiliated companies that was substantially (approximately 18 percent) better than the 2009 industry average for both surface and underground coal mining operations. Last year was the best year on record for Alpha and its affiliates, as measured by total reportable incident rate (TRIR).

Alpha affiliates received six Mountaineer Guardian Awards presented by the West Virginia Coal Association and the West Virginia Office of Miners' Health, Safety and Training at the 37th West Virginia Coal Mining Annual Symposium on Feb. 4, 2010. The following mines and preparation plants were honored:

- Kingston No. 1 Mine, Fayette County; WV

- Paynter Branch Mine, Wyoming County; WV
- Cucumber Mine, McDowell County; WV
- Poplar Ridge Mine, Webster County; WV
- White Flame Energy Mine No. 10, Mingo County; WV and
- Litwar Plant, McDowell County, WV.

The annual award is offered only to select mines and mining-related entities that meet strict safety criteria. The award recognizes those organizations that manage fatality-free operations, superior internal safety programs, cooperative teaming with authorities and minimal safety violations.

The foremost safety award in West Virginia for surface mines is the Barton B. Lay, Jr. Milestones of Safety Award, which was presented at the symposium luncheon to the Ewing Fork Mine No. 1, also known as the Pax Surface Mine, operated by Alpha affiliate Simmons Fork Mining, Inc. in Raleigh County.



Kurt Kost

Several operations of Alpha affiliates completed the year without a lost-time accident (LTA), including 14 surface mines, five underground mines and 10 support facilities, including preparation plants, loadouts and docks.

Altogether, Alpha-affiliated operations received more than 40 state and federal safety awards in 2009, including Joseph A. Holmes Certificates of Honor, awarded to the Twin

Star Loadout, near Hurley, Va., for working three years without an LTA, and to Premium Energy Surface Mine, near Gilbert, WV, for working two years without an LTA.

"Our most important job is to return each miner home safely after each shift," said Kurt Kost, President of Alpha Natural Resources. "Our goal is to reduce injuries to zero, and our affiliates continue to strive to meet that goal every day. Safety is a core element of the Alpha 'Running Right' program, and we take great pride in the safety culture and the safety performance at all of Alpha's affiliated operations. I congratulate the employees of the operations that won safety awards during the year, especially those that were accident free while helping meet America's energy needs with millions of tons of affordable coal."

A special safety video entitled "Coal Mining Safety: No Oxymoron" has been posted to

the following YouTube link: <http://www.youtube.com/watch?v=nM9i5zSW10w>

Alpha Natural Resources is one of America's premier coal suppliers with affiliate coal production capacity of more than 90 million tons a year. Alpha is the nation's leading supplier and exporter of metallurgical coal used in the steel-making process and is a major supplier of thermal coal to electric utilities and manufacturing industries across the country.

The company, through its affiliates, employs approximately 6,300 people and operates more than 60 mines and 14 coal preparation facilities in the regions of Northern and Central Appalachia and the Powder River Basin.

More information about Alpha can be found on the company's Web site at www.alphanr.com.

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International Energy Agency Offers Blue Print on Climate Change Goals

The International Energy Agency (IEA) offers blue print to deliver on ambitious climate change goals and urges all governments to send a strong signal to spur new investment for clean energy.

"While the details of a binding agreement may not be completely worked out in Copenhagen, it is more important than ever that participants send a strong, indicative and ambitious signal that can guide energy investment and policy decisions globally," said Nobuo Tanaka, the Executive Director of the International Energy Agency (IEA), recently at the UN Climate Change Conference (COP-15) in Copenhagen.

"This conference is the most important climate meeting to date, as we urgently need a framework that goes beyond 2012, the end of the Kyoto Protocol first commitment period. The economic crisis, with the resulting fall in global energy-related CO2 emissions of around 3% in 2009, gives us a unique window of opportunity to change our current, highly unsustainable energy path," said Mr. Tanaka.

"Current pledges point in the right direction, but fall short of what is needed to keep the global temperature rise to around 2°C above pre-industrial levels. The IEA proposes an energy policy and technology blueprint that can deliver ambitious climate goals to be agreed in Copenhagen, with energy efficiency at the core of CO2 reduction strategy in both the near and long term."

With energy accounting for 84% of global CO2 emissions, the IEA has analyzed what needs to be done to limit the long-term concentration of greenhouse gases in the atmosphere to 450 parts per million (ppm) of CO2 equivalent, in line with a 2°C increase in global temperature.

On current trends, unless new measures are taken, global energy-related CO2 emissions will reach 40 Gigatons (Gt) by 2030 (29 Gt in 2007) and continue rising thereafter, whereas climate stabilization requires emissions to peak

around 2020 and then decline. "The 450 Policy scenario of our flagship publication World Energy Outlook 2009 is the right path to green growth but it is a radical departure from current trends," Mr. Tanaka stressed.

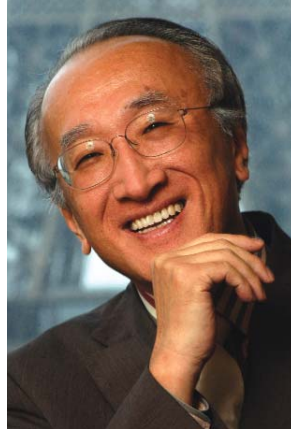
For instance, the world would need to retire a significant portion of today's coal-fired electricity plants before the end of their lifetime – by 2030, early closures around the world would amount to the equivalent of today's total coal-based power generation in Japan, EU and the US. Around 60% of global electricity production in 2030 would need to come from a mix of renewables (37%), nuclear (18%) and plants fitted with carbon capture and storage (5%). Another illustration is the dramatic shift needed in car sales, with hybrids, plug-in hybrids and electric vehicles representing 60% of sales in 2030, from around 1% today.

The bulk of the emissions reduction could be delivered by energy efficiency, accounting for over half of total abatement by 2030 in the IEA 450 Scenario. Energy efficiency is an absolute prerequisite for the deployment of the more expensive, low-carbon energy supply as it helps lowering demand first.

IEA finds that the additional investment can be recouped by end-users through lower energy bills: in industry, buildings and transport, the additional USD 8.3 trillion of required investment would lead to USD 8.6 trillion in savings between now and 2030.

"Sharing best policy practice in energy efficiency, and building capacity for implementation should be a priority area for any support from developed to developing countries coming out of Copenhagen," Mr. Tanaka said. "The social, economic, environmental and energy security benefits of energy efficiency are too large to be missed, yet experience shows that proper policy frameworks are needed to reap these benefits.

We are encouraged by the development of energy effi-



Nobuo Tanaka

ciency policies in countries like China, India, Brazil or South Africa," Mr. Tanaka added.

To support a global transition to more efficient, low-carbon energy systems, the IEA estimates that USD 10.5 trillion (with USD 8.3 trillion in end-use) are needed by 2030. With such effort, global CO2 emissions would decline after 2020, and be lower than today's level by 2030.

"Countries' announcements in preparation for Copenhagen were encouraging. Although more is needed to be on track with our 450 scenario, with current pledges, if implemented, more in line with a 550 ppm scenario (leading to a 3 degree increase in global temperature).

The results in the 2020-2030 decade will be crucial, as this is when most new technologies need to be deployed. The wave of investments that will come with the economic recovery must be climate friendly. A strong signal is needed now. Every year of delay adds USD 500 billion to the energy sector cost of reaching 450 ppm," Mr. Tanaka stressed.

The IEA has produced several roadmaps on key technologies to meet that challenge, and to guide environmental and energy decision makers on the path to needed innovations (e.g. on carbon capture and storage, wind, electric vehicle and cement manufacturing). "A cost on CO2 is also critical to guide investors toward low-carbon choices," Mr. Tanaka added.

While the Clean

Development Mechanism has achieved a lot in certain sectors, it has not curbed the growth in emissions in developing countries. Broader access to the carbon market ought to be a key element in a Copenhagen agreement, e.g. through sector- or policy-based market mechanisms in developing countries.

The IEA has shown how such mechanisms could reduce CO2 emissions in key sectors like power generation, but these must be complemented by ambitious energy efficiency improvements on the end-use side.

"The energy path to stabilize climate is clear, but only vigorous action will put our economies on that path to green growth," Mr. Tanaka emphasized. "A strong political signal is needed now in order to drive the necessary changes.

The IEA will work with all countries to turn global climate goals into practical steps for the energy sector, including through the newly proposed international low-carbon energy technology platform," Tanaka said. The platform which was endorsed by the IEA Ministerial meeting in October, will bring together policy makers, business representatives and technology experts to discuss how best to encourage the spread of clean energy technologies, with a view to doubling investments in RD&D by 2015.

"The IEA will be evaluating the energy implications of any emission goal coming out of Copenhagen, to set a clear pathway for the energy sector," Mr. Tanaka concluded.

The IEA acts as energy policy advisor for the governments of its 28 member countries and beyond to promote reliable, affordable and clean energy for the world's consumers. It was founded during the oil crisis of 1973-74, with a mandate to coordinate measures in times of oil supply emergencies. This is still a core mission of the agency.

In 2005, when devastation to oil production and refining infrastructure in the Gulf of

Mexico by Hurricane Katrina became known, in 24 hours the IEA made 60 million barrels of emergency oil available to the market. The IEA stood ready to take further measures as the Gulf Coast was pounded a second time (Hurricane Rita). This was the fourth time in its history that the IEA has been called upon to be able to respond to international energy market crises.

With the evolution of the energy markets, the IEA mandate has broadened. It now focuses well beyond oil crisis management. Energy efficiency, climate protection, energy technology collaboration and sharing its accumulated energy policy experience with the rest of the world have become core Agency objectives. In July 2005, the G8 leaders at the Gleneagles summit asked the IEA to provide advice on strategies for a clean, secure and sustainable energy future. The IEA meets this evolving mandate through the activities of its offices and intensified international collaboration.

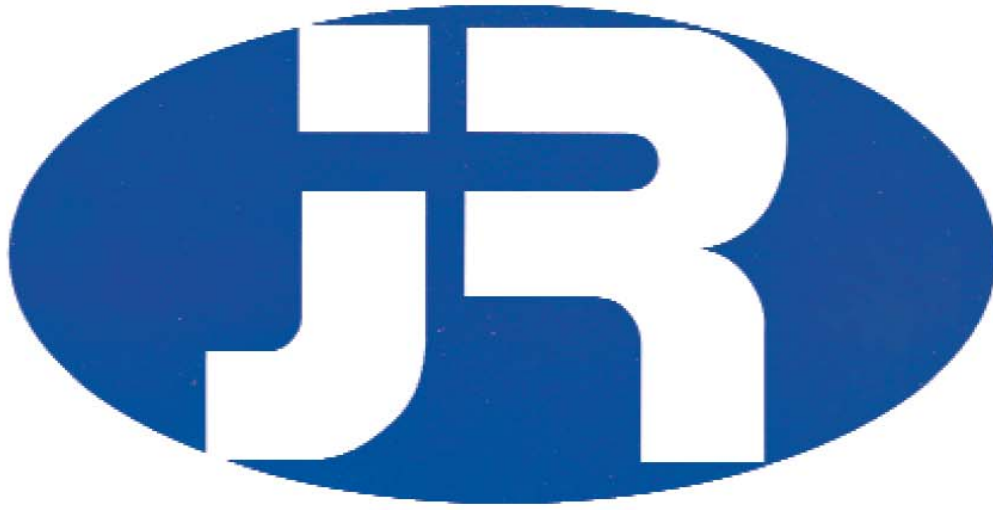
With a staff of around 150, mainly energy professionals from its 28 member countries, the IEA conducts a broad programme of energy research, data collection and analysis, extensive publications and public dissemination of the latest energy policy analysis and good practices. IEA publications are known world-wide for their objectivity.

One of IEA's duties is to oversee longer term energy needs throughout the world. Through its flagship publication "World Energy Outlook" the IEA provides analysis of longer-term energy market trends. In even-numbered years the series adopts a scenario approach to project the possible evolution of energy markets.

In odd-numbered years it analyses a topical issue confronting the energy sector. The 2005 edition concentrates on the Middle East and North Africa's crucial role in meeting the world's future energy needs.

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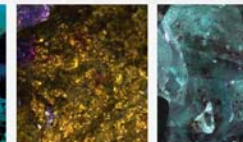


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CONSOL Energy Operations Receive Safety Awards

Four CONSOL Energy Inc. (NYSE: CNX) mining operations in West Virginia have been recognized for their outstanding safety efforts and have been named recipients of prestigious Mountaineer Guardian awards.

The Mountaineer Guardian awards, given annually to qualifying underground and surface mining operations across the state of West Virginia, recognize operations for their commitment to safety. The 2009 awards were presented during the West Virginia Coal Association's 37th annual Mining Symposium in Charleston, WV.

In the underground safety category CONSOL Energy's Loveridge Mine in Fairview,

WV, was awarded a Mountaineer Guardian award, recognizing its 577 employees for working safely for 1,313,322 hours.

In the surface mine category, Fola Surface operations and its Peach Orchard Preparation Plant, both in Clay County, WV; and Southern WV Resources #1 Surface Mine, located in Naugatuck, WV, were each recognized with the Mountaineer Guardian Award for their outstanding safety achievements.

Fola Surface Mine's average 299 employees safely worked 612,178 hours; Peach Orchard's 77 employees worked 126,027 hours safely; and Southern WV Resources #1 Surface Mine's 25 employ-

ees worked 55,241 hours safely.

"We are very proud of the safety accomplishments achieved at all of these locations," said CONSOL Vice President of Safety Lou Barletta. "Their commitment to working safely and productively is recognized through these awards. These employees pride themselves in working towards the goal of ZERO accidents each day and as a company we are proud of them and their efforts to work safely yesterday, today and in the future."

The West Virginia Office of Miners' Health, Safety and Training and the West Virginia Coal Association (Mining and Reclamation Association) established the Mountaineer

Guardian Safety Awards Program in 1983 as a joint effort to promote safety in the coalfields of West Virginia.

This special program gives recognition to mining workplaces where employees have accumulated qualifying amounts of production without experiencing a fatal accident. Mining Operations are divided into categories, based on the number of employees.

Inspectors for the West Virginia Office of Miners' Health, Safety & Training nominate companies who they feel have achieved a balance of production and safety. Selection criteria also include safety program initiatives by the company; the nominated company's safety record; and

its violation history.

CONSOL Energy Inc., a high-Btu bituminous coal and natural gas company, is a member of the Standard & Poor's 500 Equity Index and the Fortune 500. At year-end 2009, it had 11 bituminous coal mining complexes in six states and reports proven and probable coal reserves of 4.5 billion tons. It is also a majority owner of CNX Gas Corporation, a leading Appalachian gas producer, with proved reserves of over 1.9 trillion cubic feet. Additional information about CONSOL Energy can be found at its web site: www.consolenegy.com. *d*

Peabody Energy & GreatPoint Energy Announce Agreement to Pursue Development of Coal-to-Gas & Coal-to-Hydrogen Facilities with Carbon Capture and Storage

Peabody Energy (NYSE: BTU) and GreatPoint Energy recently announced they have signed an agreement to pursue development of coal-to-gas and coal-to-hydrogen projects in the United States and around the world with carbon capture and storage (CCS) that would achieve near-zero carbon emissions while liberating vast quantities of stranded oil.

The projects would be developed using GreatPoint's proprietary Bluegas(TM) technology, which utilizes catalytic hydromethanation to create pure hydrogen and substitute natural gas (SNG). This process is more efficient and cost effective than conventional gasification.

The hydrogen will be used for industrial applications or combusted to generate near-zero carbon electricity. The SNG can be transported in the existing pipeline infrastructure and used as fuel in home heating, power plants or industrial processes.

"Peabody is advancing multiple projects with GreatPoint

Energy using 21st Century technologies for greater utilization of coal in a low-carbon economy," said Fredrick D. Palmer, Peabody's Senior Vice President of Government Relations and head of the company's Btu Conversion activities. "Greater deployment of green coal with carbon capture is a clean energy solution."

Catalytic hydromethanation, when combined with advanced power generation, could eliminate more than 90 percent of carbon emissions and nearly double the efficiency of conventional coal combustion or Integrated Gasification Combined Cycle power plants, according to a recently published study by the U.S. Department of Energy's National Energy Technology Laboratory.

The technology captures the carbon dioxide (CO₂), which can be used for domestic oil production through enhanced oil recovery. The U.S. Department of Energy estimates that there are more than 60 billion barrels of stranded

U.S. oil, and the International Energy Agency estimates there are more than 200 billion barrels of stranded oil worldwide. These resources could be recovered with injection of captured CO₂.

"Agreement Signed to Pursue Development of Coal-to-Gas and Coal-to-Hydrogen Projects in U.S. and Around the World with Carbon Capture and Storage (CCS) that Would Achieve Near-Zero Carbon Emissions"

"We are extremely pleased to expand our relationship with Peabody, who we view as one of the world's most forward thinking energy companies and the leading proponent of clean uses for coal," said Andrew Perlman, President and Chief Executive Officer of GreatPoint

Energy.

"We believe that chemically converting coal into low- and near-zero carbon fuels represents the absolute fastest, largest-scale, and lowest-cost solution to reducing carbon dioxide emissions."

Peabody Energy (NYSE: BTU) is the world's largest private-sector coal company, with 2009 sales of 244 million tons and \$6 billion in revenues. Its coal products fuel 10 percent of all U.S. electricity generation and 2 percent of worldwide electricity.

Peabody is a global leader in clean coal solutions, advancing near-zero emissions and carbon management. Peabody is the only non-Chinese equity partner in GreenGen; a founding member of the FutureGen Alliance; and a founding partner of COAL21 in Australia. The company is a founding member of the Global Carbon Capture and Storage Institute and is pursuing commercialization of clean coal technologies through the U.S.-China energy Cooperation Program; the

Asia-Pacific Partnership for Clean Development and Climate; the Consortium for Clean Coal Utilization, the National Carbon Capture and Storage Center; and others.

GreatPoint Energy is the leading developer of highly-efficient catalytic hydromethanation technology, known as Bluegas(TM), by which coal, petroleum coke and biomass are converted directly into low-cost, clean, pipeline-quality natural gas, hydrogen and hydrogen-based power while allowing for the capture and sequestration of CO₂ for enhanced oil recovery.

The company has raised over \$150 million in equity and is backed by leading strategic investors including Peabody Energy, AES, Suncor Energy, Dow Chemical, Kleiner Perkins, and Khosla Ventures. GreatPoint is also recognized as a Top 50 Going Green Company by AlwaysOn. *d*



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Coal Industry Supporters Travel to Richmond to “Just Say No To Senate Bill 5664”

Eastern Coal Council Chairman Jack Richardson told a Virginia Senate Committee holding a public hearing on an anti-mountaintop mining bill in Richmond Thursday that passage of the bill would destroy Southwest Virginia's economy, threaten Virginia's energy supply and in effect ban all coal mining in Virginia.

Richardson is the vice president of CONSOL Energy's Central Appalachia operations. His remarks before the Senate Agriculture, Conservation and Natural Resources committee were echoed by a number of industry speakers, as well as representatives of the Virginia Coal Association and the Virginia Mining Association, southwest government officials, chambers of commerce leaders, service businesses and manufacturing companies, Virginia Tech students, and an

Thursday told senators the bill was in fact “a jobs killer bill.”

“This bill, if passed, will destroy Southwest Virginia's economy and the way of life to which its citizens have grown accustomed,” Richardson told the committee. “It threatens Virginia's energy supply and thus its economy. For Virginia to remain a business friendly state in which companies desire to locate, it must offer affordable and dependable energy.”

As proposed, the bill would ban disposal of waste rock produced by both surface and underground coal mining operations in any “intermittent, perennial or ephemeral stream.”

“This eliminates virtually all land where this material could be safely placed,” Richardson said. “The Division of Mined Land Reclamation would be prevented from issuing any



Jack Richardson

able balance between our nation's energy needs and protection of the environment. “Further controls are not needed,” he told the committee.

Richardson also said, the impact of the bill, if passed, would lock away billions of tons of Virginia coal that should be accessed to provide reliable and affordable electricity.

“This coal is used in compli-

tion of electricity is contrary to the goals of enhancing energy independence and promoting national security.”

Inability to open further mining in Virginia, he said, would make the value of coal reserves in the state worthless and cause a substantial loss of local tax revenues. “This could also constitute a taking without just compensation by the Commonwealth,” Richardson said.

He also pointed to the numerous beneficial uses for land after mining, including the creation of sites for schools, homes, hospitals, highways, airports and other economic development projects where developable land is at a premium.

“SB 564 is not designed just to end mountaintop mining as some have claimed, but rather it would stop all coal mining in Virginia,” Richardson said.

economy, Richardson said the bill, if passed would result in the elimination of nearly 40,000 jobs. “There are some 15.7 million people out of work in this country” Richardson said. “My question to you today is why you would even consider legislation which would put thousands more in that same predicament? That action seems highly contradictory to Governor McDonnell's announced goals to create new jobs and opportunities in the Commonwealth and to take full advantage of Virginia's indigenous energy resources. I hope that instead of supporting Senate Bill 564 that you will follow his lead. “As chairman of the coal council and on behalf of its members, I ask you to vote no on Senate Bill 564,” Richardson concluded.

Nearly 200 residents of Virginia's coalfields traveled to the state capitol to show their



Coal industry supporters rally in Richmond, VA prior to attending a Virginia Senate committee hearing to oppose Senate Bill 564. The group was joined by additional coal supporters downtown as they arrived for the hearing

attorney who challenged the bill's constitutionality -- all of whom voiced their opposition to the bill.

Senate Bill 564, which its patron Senator Patricia Ticer, called “a stream saver bill,” has also been referred to by some as an anti-mountaintop mining bill. Coal spokesmen on

new permits for coal mining, making SB 564 in effect a prohibition on further coal mining in Virginia.”

Richardson told the committee that both federal and state Surface Mining Control and Reclamation laws and regulations govern mine waste disposal and establish a reason-

ance with all state and federal environmental laws and regulations and the power generated from it helps sustain the state's economy and the standard of living for all Virginians.”

Richardson added. “To deny access to this domestic fuel which is essential for genera-

“The economy of Virginia depends on coal and can ill afford to be jeopardized in this way.”

According to National Mining Association statistics, there are about 9,000 mining jobs in Virginia.

Using a multiplier for the spin-off jobs created in the

opposition to the bill. They were joined by coal supporters from around the Commonwealth, swelling the number of those in attendance to oppose the Bill at the hearing to approximately 250.

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Coal-State Members Launch Congressional Coal Caucus

As energy issues remain at the forefront of the national political debate, a coalition of coal-state members of Congress announced today that they have teamed-up to form the Congressional Coal Caucus.

Calling coal "America's most abundant and affordable energy resource," the bipartisan group of congressmen and women note that coal provides nearly 50% of America's energy supply and generates more than 130,000 coal-mining jobs. They've pledged to use their new caucus to provide a voice for coal communities in Congress.

"Coal is a critical component to our nation's energy future," said Rep. Shelley Moore Capito, R-WV "Whether it's on a cap-and-trade bill or on clean coal technology, this caucus will give coal-states a forum to

highlight their priorities and present a unified voice. I'm proud to join my colleagues in forming this caucus and I look forward to our work together." "As a Congress, it is vitally important that we continue to support the development of clean coal technologies," Rep. Jason Altmire, D-PA, said. "I am proud to help launch this caucus, and I look forward to working with my colleagues to help enact policies that will maximize America's coal resources."

Members joining Altmire and Capito in forming the coal caucus include Reps. Tim Holden (D-PA), Denny Rehberg (R-MT), John Salazar (D-CO) and John Shimkus (R-IL). Together the new coalition will promote awareness of American coal along with the new technologies currently on the horizon that can help make coal use

cleaner and safer.

The six initial caucus members are also circulating a Dear Colleague inviting other members of Congress to join them. "The Coal Caucus gives coal states like Pennsylvania a strong voice in Congress to encourage the use of coal as an affordable, reliable and increasingly clean source of energy," said Rep. Tim Holden, D-PA. "I am proud to be a part of this effort to promote economically and environmentally sound mining, reclamation and consumption practices including clean coal technologies on Capitol Hill."

"America needs an all-of-the-above energy plan that increases domestic supplies, lowers costs and makes us less dependent on foreign sources of energy," said Rep. Denny Rehberg, R-MT. "While many in Washington may think

that energy comes from the wall outlet, Montanans have been in the energy production business long enough to understand the vital role coal plays in our country and our economy. As a caucus, we'll focus on developing cleaner and more efficient ways to use America's vast stores of coal, and by doing so, help create good-paying jobs and affordable energy for American families."

"Coal is a vital resource in Colorado and throughout the nation, and will continue to play a role in helping meet our nation's energy needs. Coal provides jobs in my district and nearly all of our energy is derived from coal. I look forward to working with my colleagues on the Coal Caucus," said Rep. John Salazar, D-CO. "With the current debates over energy policy as well as the

environment, it is more important than ever that coal interests be represented in Congress," said Rep. John Shimkus, R-IL. "We can move much faster toward energy independence by taking advantage of the enormous supply of coal that exists in my district and elsewhere in the nation. To ignore an abundant source of low-cost energy in our own country is absurd."

Republican Members of the Congressional Coal Caucus include: Representatives: Shelley Moore Capito, (WV); Denny Rehberg, (MT) John Shimkus, (IL); Rob Bishop, (UT); Eric Cantor, (VA); Geoff Davis, (KY); Charles W. Dent, (PA); John J. Duncan Jr., (TN); Gregg Harper, (MS); Cynthia M. Lummis, (WY); Tim Murphy, (PA); Pete Olson, (TX); Bill Shuster, (PA); Glenn Thompson, (PA) Blaine Luetkemeyer, (MO); Jo Ann Emerson, (MO); Harold Rogers, (KY); Michael Conaway, (TX); Brett Guthrie, (KY); Doug Lamborn, (CO); Robert E. Latta, (OH); Fred Upton, (MI); Sam Graves, (MO); Marsha Blackburn, (TN); Mark Souder, (IN); Jason Chaffetz, (UT); Roy Blunt, (MO); Ed Whitfield, (KY); Spencer Bachus, (AL); Mike Pence, (IN); John Carter, (TX); Roscoe Bartlett, (MD); Phil Roe, (TN); Devin Nunes, (CA); Candice Miller, (MI); Thaddeus McCotter, (MI); John Boozman, (AR); Michael McCaul, (TX); Lee Terry, (NB); Bob Goodlatte (VA); and Joe Barton (TX).

Democratic Members of the Congressional Coal Caucus include: Reps. Jason Altmire, (PA); Rick Boucher, (VA); Tim Holden, (PA); John T. Salazar, (CO); Jerry F. Costello, (IL); Artur Davis, (AL); Brad Ellsworth, (IN); Stephanie Herseth Sandlin, (SD); John P. Murtha, (PA -deceased); Earl Pomeroy, (ND); Nick J. Rahall II, (WV); Mike Ross, (AR); Zachary T. Space, (OH); Charles A. Wilson, (OH); Alan B. Mollohan, (WV); Tim Ryan, (OH); Joe Donnelly, (IN); Dan Boren (OK); and Charlie Melancon (LA). *el*

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Coal Leader Product News

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 seat. The operator's sound exposure is below 80 dB (A) in the cabin. 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. The designers have done a great job of combining new technology with some of our proven design features," said Ed Tanner, Business Line manager, Atlas Copco Underground Rock

Excavation.

The Minetruck MT42's North American launch will be in Canada in February 2010 and will be available for delivery in the United States in the third quarter of 2010.

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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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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:

Control Familiarization, Shovel Positioning, Following Grade, Cab-side Dumping, Blind-side Dumping, Single-pass Digging, Cab-side loading, and Blind-side Loading. Simulator results can be saved in a database and reviewed by the user and training instructor only.

Suspended Belt Magnets

Suspended Belt Magnets are constructed with an oversized Plate Magnet. They are designed for suspension above a belt conveyor and are engineered to remove ferrous contaminants from high volume deep burdens. As product passes under the magnet, metal contaminants are drawn out of the material to the face of the magnet. This style of magnet should be installed at the discharge of the head pulley if possible.

Material will be flowing more freely and can be thrown into the face of the magnet increasing the separation results over an installation that has the magnet suspended over a troughed belt. This can be supplied with a wiper arm or strip-plate to simplify cleaning.

For automated continuous

cleaning, a POW-R CLEAN option can be selected which incorporates a set of pulleys, belt, motor, and reducer that travels around the Suspended Belt Magnet discharging metal contaminants automatically.

Suspended Belt Magnets can be installed in an in-line or



cross belt configuration. Used in such industries as: feed & grain, concrete recycling, mining operations, municipal recycling, scrap yards, and other recycling and bulk processing industries. For more information contact: 248-628-3808; Fax: 248-628-3844 Email: andrea@puritanmagnetics.com or visit website: www.puritanmagnetics.com

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Cat 854K Wheel Dozer Features Offers New Features

The Caterpillar 854K wheel dozer incorporates innovations to lower engine emissions and boost fuel efficiency, improve reliability and serviceability, and optimize operator efficiency and comfort. Specifically, the 854K uses a highly efficient Cat C32 engine and a new radiator with improved heat transfer capabilities. A variable speed demand fan aids efficiency. For the operator, a new, larger cab includes a trainer's seat, and a new low-effort joystick controls all blade functions.

The 854K replaces the 854G and retains the best features, including the impeller clutch torque converter for superior operator control and



optimum power to the ground, lockup clutch for direct drive efficiency, and STIC™ control system for reduced steering and transmission control effort.

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Boucher Introduces Measure to Halt EPA Regulation of Greenhouse Gas Emissions

U.S. Representative Rick Boucher (D-VA) introduced legislation to suspend for two years action by the Environmental Protection Agency (EPA) to regulate greenhouse gas emissions. Boucher joined his colleagues Nick Rahall (D-WV), Chairman of the Natural Resources Committee, and Alan Mollohan (D-WV) in introducing the measure entitled the Stationary Source Regulations Delay Act. A companion measure has been introduced in the U.S. Senate by Jay Rockefeller (D-WV).

The Stationary Source Regulations Delay Act would delay for two years EPA action with regard to carbon dioxide or methane regulations for stationary sources, while allowing the consensus mobile sources regulations to move forward. This approach differs from other proposals to halt or delay EPA action on greenhouse gas regulation. "By structuring the measure in this manner, we are seeing to find a responsible middle ground that can be enacted," Boucher said.

Following the decision by the U.S. Supreme Court that greenhouse gases are a pollutant, the Environmental

Protection Agency is now legally compelled to regulate greenhouse gases under the existing Clean Air Act. That law is not well suited for such action since it disables EPA from taking into account the unique needs of the coal industry and electric utilities that burn coal. "EPA regulation of greenhouse gases would be the worst outcome for the coal industry and coal related jobs," Boucher said.

"In June, the U.S. House of Representatives approved a balanced measure which will control greenhouse gas emissions while preventing economic disruption. While this measure is far from perfect, I was able to secure a number of important changes to the bill which allow for the continued and robust use of coal and the deployment of carbon capture and storage technologies necessary for the coal industry's future success. If EPA is allowed to regulate greenhouse gas emissions, economic considerations simply cannot be taken into account. EPA regulation would be costly and cumbersome," Boucher said. "The measure I have introduced will prevent the EPA from acting to regulate green-



Rick Boucher

house gas emissions for two years, providing Congress time to approve a thoughtful regulatory program," he added.

**Legislation
Would
Suspend for 2
Years Any EPA
Action
Regulating
CO2**

Last year, the U.S. House of Representatives approved the American Clean Energy and Security Act, which establishes a program to regulate greenhouse gas emissions. Congressman Boucher added key provisions to the measure which protects the coal industry by enabling utilities to continue using coal while greenhouse emissions are reduced. His amendments assure funding for carbon capture and storage technologies and enable utilities to keep burning coal while paying others to reduce emissions. Specifically his key changes to the bill provide:

- Free allowances to emitters, keeping the program affordable and encouraging coal use..
- An assured \$10 billion in funding for carbon separation and storage (CCS) technology development and an additional \$150 billion to incent its use by coal burning utilities. These funds will ensure that the technologies are fully developed and available at commercial scale.
- 2 billion tons of offset credits which enable utilities to keep burning coal while paying others to reduce emissions. This number is roughly equal to all the greenhouse gas emissions

from coal use nationwide.

• Modifications to the performance standards which require new coal plants to meet certain CCS requirements. Congressman Boucher has succeeded in changing those to ensure that new coal plants will not be required to use CCS technology before it is widely commercially available and affordable.

While these changes make critical improvements to the bill, Boucher continues to work for further improvements as the bill moves through the legislative process. The measure introduced today would give Congress time to approve this balanced approach before EPA acts with costly regulations.

"While some may prefer to halt EPA action permanently, the votes do not exist in the Senate or the House to remove all EPA regulatory authority. Our bill is a responsible, achievable approach which prevents the EPA from enacting regulations that would harm coal and gives Congress time to establish a balanced program," Boucher concluded.

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NMA Response to Natural Gas for Electricity

Coal for Natural Gas Switch Is Bad Public Policy; Undermines Administration's Objectives

National Mining Association (NMA) President & CEO Hal Quinn recently issued the following statement in response to press reports that the Obama administration is considering market enticements to switch coal for natural gas in U.S. electricity generation as part of the administration's efforts to secure sufficient votes for climate legislation:

"Creation of an artificial electricity generation market for natural gas in place of affordable, abundant and reliable coal is bad public policy and undermines the administration's economic and energy objectives and the nation's needs on a number of fronts.

NMA hopes these press reports are incorrect and the administration is not considering such ill-founded public policy for the following reasons:

- Increased energy prices will cost jobs and harm the economy. Coal-based generation is the nation's most affordable electricity. Switching out coal for gas will lead to higher energy prices for businesses, manufacturers and households when nearly 15 million Americans are still looking for work and our economy is weak. Rising natural gas prices have consistently outpaced the cost of electricity. In 2008, natural gas generated 22 percent of U.S. electricity while accounting for 54 percent of annual fuel expenses of the electric industry. Over the last 10 years, when manufacturers

paid on average 48 percent more for electricity, they paid 268 percent more for natural gas and lost more than 3 million jobs because of high natural gas prices, according to Industrial Energy Consumers of America.

- Vital CCS technology will be thwarted and technology exports foregone. The world is looking to the development and deployment of carbon capture and storage technology (CCS) along with other advanced clean coal technologies as the most affordable and effective ways to control carbon emissions. According to the International Energy Agency, CCS deployment can reduce the costs of achieving carbon reduction goals by 70 percent. If the U.S.—with the world's largest coal reserves—creates

a false market for gas and does not aggressively pursue CCS technology, not only will we lose important export markets, we likely will doom worldwide deployment of this vital technology.

- Energy security will be compromised. While natural gas is currently used to generate approximately 20 percent of U.S. electricity and makes a valuable contribution to our energy mix, the ability of domestic reserves to meet a significantly greater portion of U.S. electricity demand is constrained by a number of factors, including transmission and system dispatch factors; natural gas supply and price; and transportation and storage issues, as recently detailed by the Congressional Research Service (CRS). If an artificial

market is created for natural gas and domestic sources cannot meet demand, imported gas will take up the slack, as it has in the past.

"Artificial energy markets are leading to higher energy costs for American businesses and consumers and have not demonstrated an ability to generate good-paying, long-term jobs for U.S. workers. As recent analyses have shown, per billion dollars of investment, coal-based generation outperforms gas, solar and wind in the creation of construction and operating jobs. Adding another layer of distortions to our energy markets is not in the nation's interests and is bad public policy that we hope the administration has no interest in pursuing." *d*

Bipartisanship Requires Work and Will

By Lee H. Hamilton, Director
Center on Congress
at Indiana University

After seven hours together at their recent health-care forum, President Obama, congressional Democrats and congressional Republicans emerged no closer to an agreement than when they started. It was as fine a tutorial as you could want on why true bipartisanship is so elusive.

There's no question that some substantive issues stand in the way of a bipartisan consensus on health care. As The New York Times editorialized the following day, "The main lesson...is that differences between Democrats and Republicans are too profound to be bridged." Each side took pains to lay out its thinking, with plenty of details and ideas to back them up. Yet what was missing was the most important detail of all: the political will necessary to overcome partisan differences and strike an accord together. Intense partisanship has become the norm on Capitol Hill.

Partisanship is not all bad. It can drive a healthy search for alternative policy ideas and ensure that a diversity of voices

exists in Congress, helping its members represent different constituencies across the land rather than some inside-the-Beltway consensus.

But partisanship can also go too far, degenerating into polarization and gridlock, and undercutting efforts to make meaningful progress on important issues.

The partisanship we see on Capitol Hill these days represents the failure of what I think of as the "Shakespeare Rule": To thine own self be true. Congress is made up of 535 individuals representing an extraordinarily diverse array of constituencies; it's unlikely that hundreds of them all think identically. So when a party votes unanimously on anything, the only conclusion we can draw is that some of its members are putting party loyalty ahead of their own judgment. Even worse, some have decided to vote the party line even when that vote is repugnant to them.

Congress is not wholly partisan, there have been some recent encouraging signs, such as the willingness of a few Republican senators to join with Democrats in ending debate on a jobs bill, but all too



Lee Hamilton

often it looks like the health-care forum: lots of heated discussion, but no will to set aside differences and negotiate seriously.

Pursuing bipartisanship requires far more than simply talking about finding common ground. It means seeking a fundamentally different attitude, asking people to help make the country work rather than trying to score political points.

That is why bipartisanship is often praised but only rarely pursued. It demands that both sides believe it is better to reach an agreement than to fail to reach an agreement. And it

does not consist of one side simply inviting the other to see the wisdom of its proposals, as is often the case with presidents, who tend to interpret "bipartisanship" as an invitation to accept their programs. Rather, it means an honest effort by members of both parties to find common ground and build on it.

This requires hard work. Seeking bipartisan agreement means not just taking the time to listen to the other side; it also means really understanding their point of view and finding ways of incorporating at least some of it into your own thinking.

It means identifying the critical issues and the facts that underlie them, and then making proposals that address them directly — not proposals that appear magnanimous but in fact don't get to the core problems.

Perhaps above all, it means not exaggerating disagreements for political gain, but instead assessing realistically where differences lie and then coming up with pragmatic and serious approaches to bridging them.

Our history is full of exam-

ples of what can happen when this process works, from Social Security and the GI Bill to food stamps, Medicare and welfare reform. But it is equally full of failures — cases in which a few people on each side who approached an issue in good faith were undermined by those at the table who saw greater gain in not finding agreement, or instances in which neither party could surmount their short-term political calculations and enter negotiations hell-bent on finding agreement.

For in the end, that's what it takes: an attitude that agreement is the chief goal and that the job of the politician is to make the country work. Politicians love to praise bipartisanship and bemoan its lack. They're less willing to own up to how often they don't actually want it, much less how hard they'll have to work to achieve it. Until they do, any "bipartisan" forum we see will be so in name only.

Lee Hamilton is Director of the Center on Congress at Indiana University. He was a member of the U.S. House of Representatives for 34 years.

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CONSOL Energy Headquarters Receives Environmental Award

CONSOL Energy Inc.'s (NYSE: CNX) headquarters, located in Southpointe near Canonsburg, PA, has become the first building in the business complex to be LEED (Leadership in Energy and Environmental Design) certified. Known as CNX Center, the 309,000 square-foot building was designed to be energy-efficient and compatible with the environment by including multiple features required for the LEED certification, such as public transportation stops close to the building, bicycle stalls for employees, an exercise facility and showers.

CONSOL Energy Chief Executive Office J. Brett Harvey said, "CONSOL Energy takes its environmental stewardship very seriously and we are extremely pleased to have been able to be the first company in Southpointe to receive

LEED certification. We designed our company's headquarters with a commitment to conserving our natural resources." Harvey added, "Often - small things like reducing water usage or planting a roof garden can have the biggest impact on lowering costs and sustaining the environment. I am confident our efforts have paved the way for other entities to build and operate sustainably."

During construction, local materials (obtained within a 500-mile radius), low chemical emitting paints, adhesives and carpet, and wood certified to Forest Stewardship Council (FSC) standards were utilized. The project team also recycled more than 75 percent of all waste, diverting it from the landfill.

Overall, the water usage in the building was reduced by

more than 20 percent when compared to similar buildings. Native landscaping was also designed and installed to reduce the irrigation system demands to utilize 50 percent less water than the calculated mid-summer baseline. A roof garden also reduces heat gain and provides a serene setting where employees can gather.

With the building serving as CONSOL Energy's corporate headquarters, a Welcome Center for visitors was included that displays company artifacts, provides interactive displays that highlight the company's history and its various business units. The Welcome Center also has a small theatre and a computerized mine tour. Occupancy sensors ensure that lights are turned off when offices are unoccupied and lighting controls for the building's interior and exterior lights

enable lighting to be reduced during non-peak occupancy times. Skylights provide natural lighting to a portion of the building, thereby reducing electrical costs. High performance windows and sunshades (on the exterior of the building) are utilized to reduce the impact of sunlight and reduce the building's thermal load. Combined with other energy-efficient initiatives within CNX Center, CONSOL Energy anticipates an energy savings of roughly 18 percent annually, reinforcing CONSOL Energy's commitment to the environment.

Kevin Turkall, an architect with designstream llc, designers of CNX Center, says, "LEED certification was a primary objective from the onset of the project. CONSOL was very clear in its position that - while they are in the business of selling energy, they see

themselves as stewards of the environment. They want to lead by example and demonstrate the need to conserve wherever possible. The result is a building where the main atrium core and most offices experience natural daylighting during working hours, and energy bills are significantly lower than the previous headquarters - even though the building is substantially larger."

LEED is an internationally recognized green building certification system, providing third-party verification that a building was designed and built using strategies aimed at improving performance in energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

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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.
- Highly accurate navigation system available as an option.

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- WV COMPLIANT DIESEL EQUIPMENT
- DIESEL GENERATORS
- ROCKDUST PIPELINE SYSTEMS
- SERVICE VEHICLES
- BATTERY, TROLLEY OR DIESEL POWER