UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): February 24, 2009 (February 24, 2009)

Arch Coal, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation) 1-13105 (Commission File Number) 43-0921172 (I.R.S. Employer Identification No.)

CityPlace One One CityPlace Drive, Suite 300 St. Louis, Missouri 63141 (Address, including zip code, of principal executive offices)

Registrant's telephone number, including area code: (314) 994-2700

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

On February 24, 2009, Steven F. Leer, Chairman and Chief Executive Officer of Arch Coal, Inc., will deliver a presentation at the BMO Capital Markets 2009 Global Metals and Mining Conference that will include written communication comprised of slides. The slides from the presentation are attached hereto as Exhibit 99.1 and are hereby incorporated by reference.

A copy of the slides will be available at http://investor.archcoal.com/events.cfm for 30 days.

Item 9.01 Financial Statements and Exhibits.

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The following exhibit is attached hereto and furnished herewith.

Exhibit No.	Description
99.1	Slides from the presentation at the BMO Capital Markets 2009 Global Metals and Mining Conference.
	1

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: February 24, 2009 Arch Coal, Inc.

By: /s/ Robert G. Jones

Robert G. Jones

Senior Vice President – Law, General Counsel and Secretary

Exhibit Index

Exhibit	
No.	Description

99.1 Slides from the presentation at the BMO Capital Markets 2009 Global Metals and Mining Conference.









BMO Capital Markets 2009 Global Metals & Mining Conference

Steve Leer, Chairman & CEO Arch Coal, Inc.

Hollywood, Florida February 24, 2009

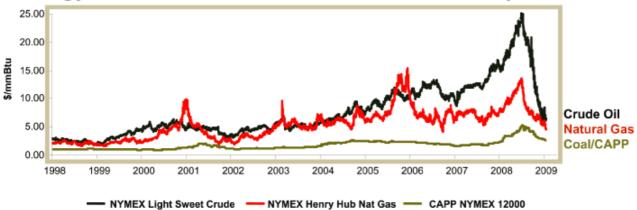
Forward-Looking Information

This presentation contains "forward-looking statements" – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from changes in the demand for our coal by the domestic electric generation industry; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from operational, geological, permit, labor and weather-related factors; from fluctuations in the amount of cash we generate from operations; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a description of some of the risks and uncertainties that may affect our future results, you should see the risk factors described from time to time in the reports we file with the Securities and Exchange Commission.

This presentation includes certain non-GAAP financial measures, including Adjusted EBITDA. These non-GAAP financial measures are not measures of financial performance in accordance with generally accepted accounting principles and may exclude items that are significant in understanding and assessing our financial results. Therefore, these measures should not be considered in isolation or as an alternative to net income from operations, cash flows from operations, earnings per fully-diluted share or other measures of profitability, liquidity or performance under generally accepted accounting principles. You should be aware that our presentation of these measures may not be comparable to similarly-titled measures used by other companies. A reconciliation of these financial measures to the most comparable measures presented in accordance with generally accepted accounting principles has been included at the end of this presentation.



After an exceptionally strong first half of 2008, energy markets have weakened considerably



- Global economic recession has led to a contraction in energy demand
 - Electricity use and steel production have slowed
- Weak market trends also are spurring swift supply rationalization
 - Lack of credit causing financial distress among smaller or leveraged companies
 - Expansion projects are being delayed and production is being trimmed
 - Under investment in supply will set the stage for next market up-cycle

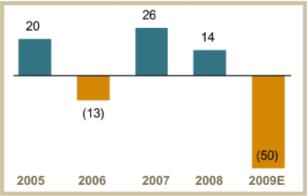
Source: ACI, NYMEX, Argus Coal Daily

Power generation and coal consumption are likely to be down in 2009, but so will supply

- Global economic slowdown is putting pressure on coal markets in the near term
 - Expect demand contraction of 50 million tons in 2009, driven by reduced power and export demand as well as the potential for natural gas displacement
- Supply rationalization is underway, and will help to rebalance markets
 - Announced domestic coal supply cuts total nearly 35 million tons
 - We're already seeing production declines year-to-date



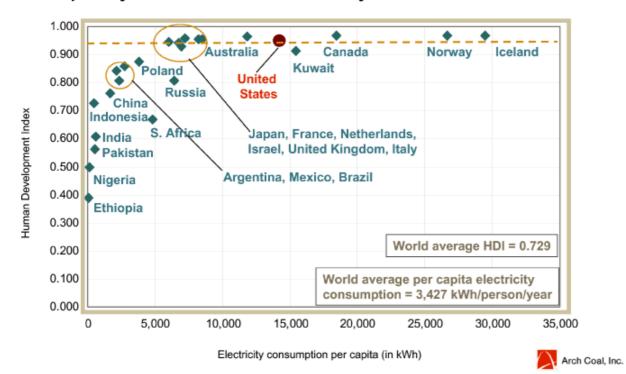






Source: EEI, EIA, MSHA and ACI

Prosperity is linked to electricity use

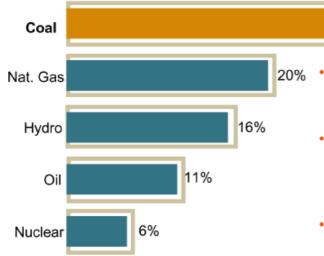


Source: United Nations Human Development Report 2007/2008

Coal has been the world's fastest-growing fuel source in the past seven years

Cumulative Percent Change in Global Energy Consumption 2000 – 2007

(in million tonnes of oil equivalent)



Since 2000, global coal use has grown by 35%, nearly double the consumption growth in natural gas

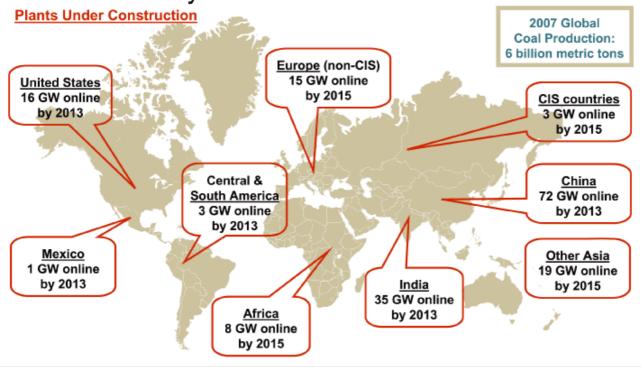
35%

- Growth in coal demand will continue to be driven by consumption in the developing world, with gains in the developed world as well
- Fossil fuels are expected to remain dominant global energy sources through 2030



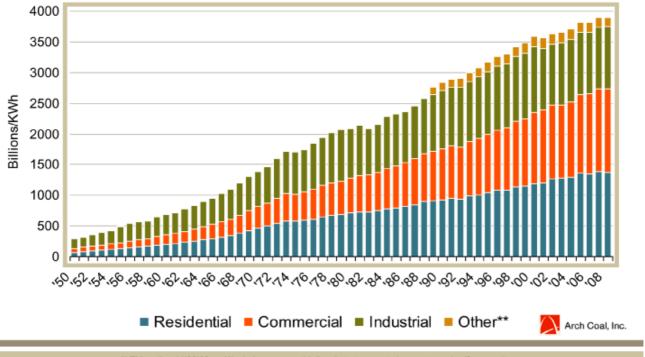
Source: BP Statistical Review of World Energy 2008

Around the world, countries are building coal plants to fuel electricity needs



Source: ACI and Platts International

In the United States, electricity demand has steadily climbed since 1950



Source: EIA

*LTM ending 11/30/08

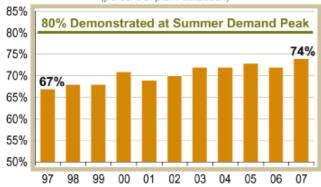
**Includes power sold directly to transportation sector and self-generating power

U.S. coal consumption growth will be driven by increasing capacity utilization and new plant start-ups

LONG-TERM FAVORABLE ENERGY TRENDS

Average Capacity Factors at Existing U.S. Coal-Fueled Power Plants

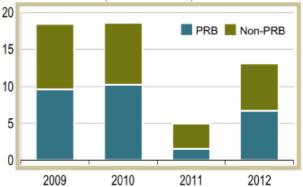
(percent of plant utilization)



- Average utilization for the U.S. coal generation fleet continues to climb
- Plants have demonstrated the ability to operate at an 80% level in summer
 - Achieving 80% utilization equates to an incremental 80 million tons annually

Anticipated Annual Supply Needs for U.S. Coal Plants Under Construction





- Build-out of 16 GW through 2012 equates to 55 million tons of new annual coal demand
- PRB will likely service roughly half of this demand

Source: Platts, EIA and ACI

CAPP index coal prices have fallen considerably; some high-cost supply likely to disappear



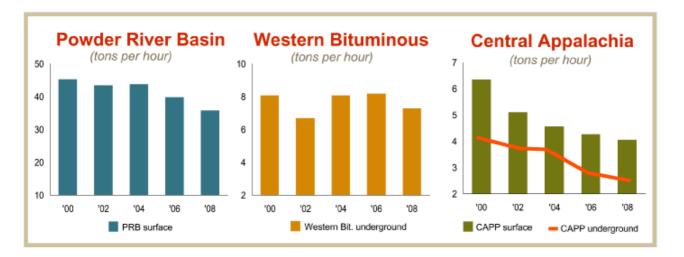
- CAPP index forward prices have fallen more than 40% since last fall
- · Current prices are likely below the marginal cost of some producers



Source: ACI and Argus Coal Daily

U.S. coal mining productivity has been on the decline since the start of this decade

LONG-TERM FAVORABLE ENERGY TRENDS

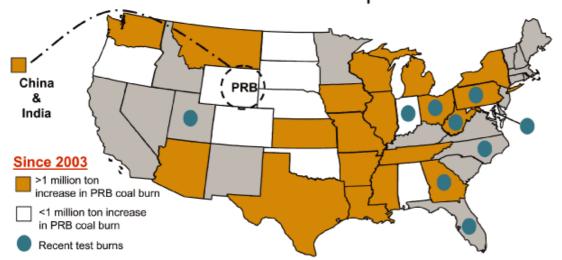


Productivity declines are occurring across all major basins, including Northern Appalachia and the Illinois Basin



Source: ACI, Energy Velocity

Powder River Basin market expansion is underway



LONG-TERM FAVORABLE ENERGY TRENDS

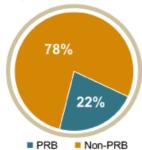
- PRB demand has grown by more than 80 million tons in past 5 years, increasing penetration of existing markets and expanding reach into new markets
- · Arch has signed agreements with traditional and non-traditional PRB customers to test - as well as increase burn of - PRB coal
- · This trend should help to further unlock the value of reserves in the region over time

Slide 12 Source: ACI

Since 1990, PRB coal has gained market share in border states just east of the Mississippi River

Border States East of Mississippi River

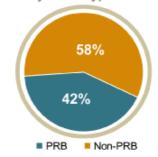
Burn by Coal Type circa 1990



Eastern border state power plants in Wisconsin, Illinois, Tennessee and Mississippi historically burned a small mix of PRB coal

Border States East of Mississippi River

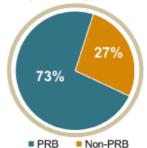
Burn by Coal Type circa 1995



 By 1995, power plants in these four states increased their mix of PRB coal from 22 percent to 42 percent in just five years

Border States East of Mississippi River

Burn by Coal Type circa 2008

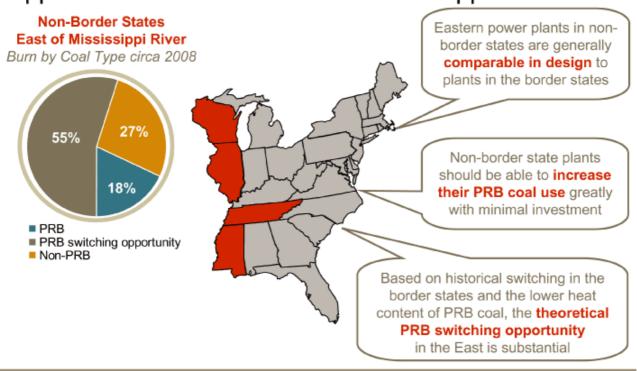


 Current 73 percent mix of PRB coal has been achieved with relatively modest capital investment

Source: ACI and Energy Velocity

*Border states represent WS, IL, TN and MS

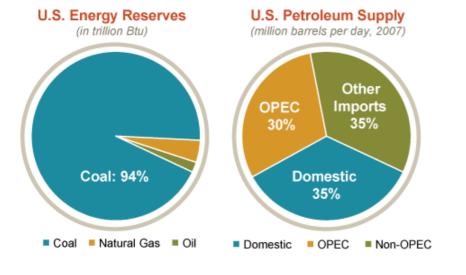
We foresee increased PRB market expansion opportunities further east of the Mississippi River



Source: ACI and Energy Velocity

Coal is an affordable and secure energy choice for America

LONG-TERM FAVORABLE ENERGY TRENDS





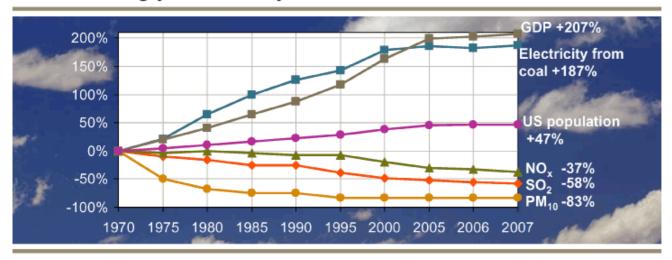
U.S. Fuel Prices

(\$/million Btu at 2/20/09)



Source: EIA, BP Statistical Review of World Energy 2008, Argus Coal Daily and NYMEX

Since 1970, coal has been used in increasingly clean ways in the United States



Higher efficiency rates and carbon capture technologies create opportunities for reducing carbon intensity as well



Source: NMA, EPA

NO_x (Nitrogen Oxide), SO₂ (Sulfur Dioxide), PM10 (Particulate Matter)

President Obama recognizes need for low-cost and secure energy; supports clean coal technologies



"To the extent ... that we can sequester carbon, capture greenhouse gases before they're emitted into the atmosphere, that's going to be good for everybody. Because if we don't, then we're going to have a ceiling at some point in terms of our ability to expand our economies and maintain the standard of living ..."

U.S. President Obama (2/18/09)



- Obama has announced plans to develop five "first-of-a-kind" commercial scale coal-fueled plants with carbon capture and sequestration (CCS) technology
- New stimulus bill includes \$3.4 billion to advance clean coal technologies, including CCS development

Source: ACI Slide 17

Clean coal technologies can create jobs, increase energy security and address climate concerns



Plug-in hybrids are perhaps the best and most realistic way to decarbonize the automotive fleet



Coal can be converted into transportation fuels, thus reducing our reliance on imported energy



Coal can be converted into synthetic natural gas for use in residential as well as a wide range of industrial applications

- Coal conversion technologies can unlock coal's full potential
- Arch participates via an equity interest in DKRW, who plans to build a coal-to-gasoline facility on Arch's reserves in southern Wyoming
 - Proposed plant would capture CO2 to enhance recovery in domestic oil fields



Source: ACI Slide 18

Arch is funding university research projects dedicated to advancing clean coal technologies

The goal of the Consortium for Clean Coal Utilization at Washington University in St. Louis is to bring university researchers, industries, foundations and government organizations together to research clean coal technology.



Washington University in St. Louis



The Clean Coal Technology Center at the University of Wyoming's School of Energy Resources is dedicated to advancing coal utilization research as well as school programs geared towards energy-related careers.



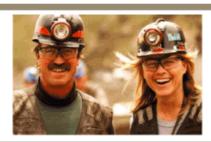




Source: ACI, university websites

Arch Coal is well-positioned for the future

LONG-TERM FAVORABLE ENERGY TRENDS







- One of the largest coal producers in the United States
- We supply roughly 12 percent of the U.S. coal supply
 - Provide cleaner-burning, low-sulfur coal to domestic power producers to fuel 6 percent of the nation's electricity
 - Ship coal to domestic and international steel manufacturers as well as international power producers
- Our talented workforce operates large, modern and efficient mines
- Industry leader in mine safety and environmental commitment



Source: ACI Slide 20

Arch's national scope of operations and reserve base includes presence in four major U.S. coal basins

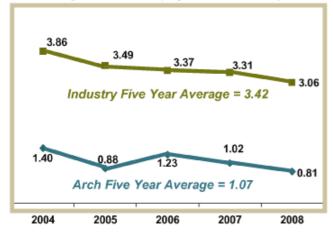


Source: ACI assigned reserves at 12/31/07

Arch's safety and environmental performance is the best among the largest public coal companies

Lost-Time Safety Incident Rate

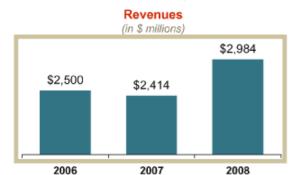
(per 200,000 employee-hours worked)



- Arch's safety record is the best in the U.S. coal industry
 - Awarded MSHA's Sentinels of Safety honor for operating the nation's safest underground coal mines in 2006 and 2007
- Arch's environmental performance ranks first among major coal industry peers
 - Earned 5 National Good Neighbor Awards since 2003

Sources: ACI, MSHA Slide 22

Arch's financial performance highlights the success of the company's market-driven philosophy





\$1.80 \$1.21 \$2.45



2007

2008

Source: ACI

Note: Results adjusted for stock splits.

*EBITDA reconciliation is at end of presentation

2006

Arch's market-driven strategy will be the driver of future value creation

LONG-TERM FAVORABLE ENERGY TRENDS

- Reduce production targets during weak market cycles
 - Preserves future value of reserve base
- Lower capital spending levels
 - Match spending with our expectations of market demand and reduced production targets
- Diligently manage controllable costs
 - Maintain operational flexibility at our operations
- Remain patient in sales contracting
 - Layer in sales as market rebounds
 - Use of trading to optimize asset base



Source: ACI Slide 24

Arch's future growth avenues are compelling

Strategic Growth

Consider acquisitions or other investments that strategically fit and create value

Organic Growth

Invest in core businesses to enhance profit growth and return on capital, evaluate opportunities to further upgrade and expand reserve base

Shareholder Returns

Market Expansion

Consider investments to expand market for coal (and improve coal's value proposition) through Btu-conversion and other advanced coal technologies

Capital Structure Enhancement

Maintain strong balance sheet, and consider other vehicles for value creation, such as share repurchases or dividend increases, when advantageous



Source: ACI Slide 25

EBITDA Reconciliation Chart

Included in the accompanying presentation, we have presented certain non-GAAP measures as defined by Regulation G. The following reconciles these items to net income as reported under GAAP.

	Year Ended December 31,			
	2006	2007	2008	
(in \$000s)				
Net income	\$ 260,931	\$ 174,929	\$ 354,330	
Income tax (benefit) expense	7,650	(19,850)	41,774	
Interest expense, net	60,639	72,265	64,285	
Depreciation, depletion and amortization	208,354	242,062	292,848	
Expenses from early debt extinguishment and other non-operating	7,447	2,273		
Adjusted EBITDA	\$ 545,021	\$ 471,679	\$ 753,237	

Source: ACI