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): December 4, 2008 (December 4, 2008)

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:

- 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))
- 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 December 4, 2008, Deck Slone, Vice President — Government, Investor & Public Affairs of Arch Coal, Inc., will deliver a presentation at the Raymond James 1st Annual Coal Investors 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.

(d)	Exhibits

The following exhibit is attached hereto and furnished herewith.

Exhibit No.	Description
99.1	Slides from the December 4, 2008 presentation at the Raymond James 1st Annual Coal Investors 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: December 4, 2008 Arch Coal, Inc.

By: /s/ Robert G. Jones

Robert G. Jones Senior Vice President — Law, General Counsel and

Secretary

2

Exhibit Index

Exhibit	
No.	Description

99.1 Slides from the December 4, 2008 presentation at the Raymond James 1st Annual Coal Investors Conference.











Raymond James 1st Annual Coal Investors Conference

Deck Slone, Vice President – Government, Investor & Public Affairs Arch Coal, Inc.

New York December 4, 2008

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.



Headwinds confronting coal have strengthened, but seeds of a correction are being sewn

- Unprecedented credit and financial crisis
 - Lack of credit will cause financial distress among smaller producers
 - Under-investment in supply is virtually certain
 - M&A and consolidation opportunities increase
- Increasingly difficult regulatory environment
 - Recent court challenges already constraining issuance of new permits
 - New administration could impose further restrictions
 - Net effect likely to increase operating costs and further curtail supply

Global economic slowdown; recession in developed markets

- Contraction will delay expansion projects and idle production
- Developing economies are still expected to grow, albeit at a slower pace
- Demand recovery, when it occurs, should provide upside
- Weather and natural gas substitution overhang
 - Weather trends normalize over time
 - Widespread switching to natural gas is unlikely as it would cause a substantial spike in natural gas prices



Source: ACI Slide 3

Coal inventories at U.S. generators appear high, but remain inline with historical range

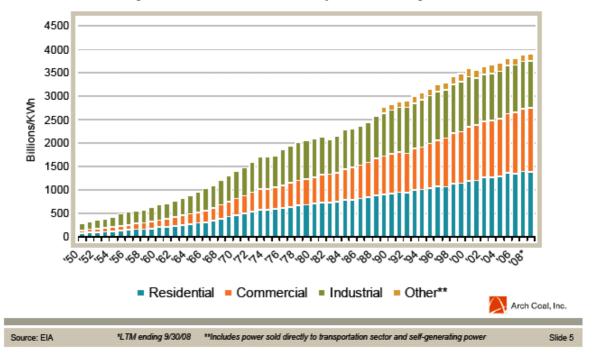




Arch Coal, Inc.

Source: EIA through September 2008 and ACI

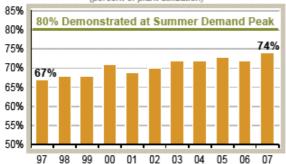
Electricity demand in the United States has steadily climbed over the past 50+ years



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

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

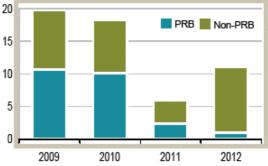
(percent of plant utilization)



- 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 86 million tons annually

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

(in millions of tons)



- Build-out of 15.5 GW equates to 55 million tons of new coal demand annually over next four years
- PRB will likely service roughly half of this demand

Source: Platts, EIA and ACI Slide 6

CAPP index coal prices have fallen considerably; some high-cost supply may simply disappear

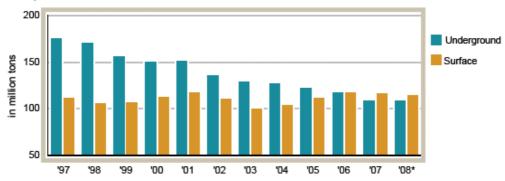


- Central Appalachia index forward prices have fallen below the marginal cost of some producers in the region
- · Permitting issues will only exacerbate reserve degradation



Source: ACI and Argus Coal Daily

Pressures on Central Appalachian coal production continue to build

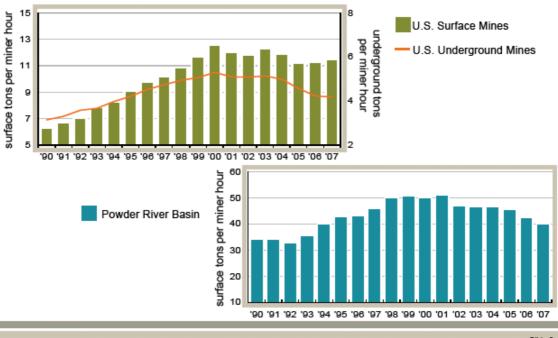


- Despite price spikes in '01, '04 & '08, production peaked in 1997
- Cost pressures and reserve degradation remain significant
- Regulatory hurdles threaten surface production
- Consolidation and rationalization are likely



*LTM ended 9/30/08 Slide 8 Source: ACI

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



Source: ACI, MSHA Slide 9

PRB market expansion is underway



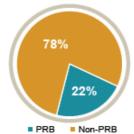
- PRB has expanded its reach by more than 80 million tons in past 5 years
- · Arch has signed agreements with traditional and non-traditional PRB customers to test - as well as increase burn of - PRB coal
- · We expect this trend to continue, which should help to further unlock the value of reserves in the region over time

Slide 10 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

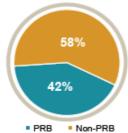


· Eastern border state power plants in Wisconsin, Illinois, Tennessee and Mississippi historically

burned a small mix of PRB coal

Border States East of Mississippi River

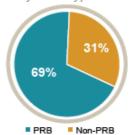
Burn by Coal Type circa 1995



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 2007

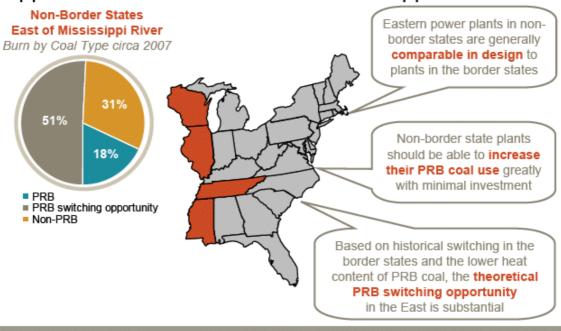


· Current 69 percent mix of PRB coal has been achieved with relatively modest capital investment

Source: ACI and Energy Velocity

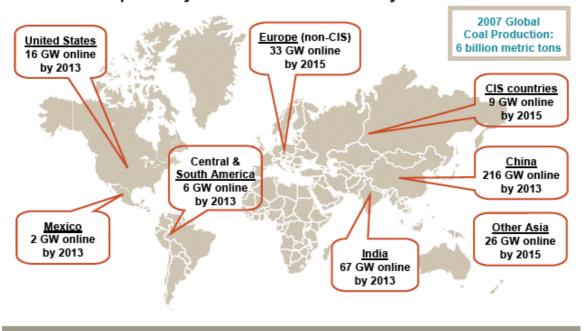
*Border states represent WS, IL, TN and MS

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



Source: ACI and Energy Velocity

Around the globe, countries will continue to embrace coal as a primary source for electricity



Source: ACI and Platts International

Global coal supply flows will continue to shift due to growing demand and supply constraints

Key Trends in Atlantic Basin Coal Markets

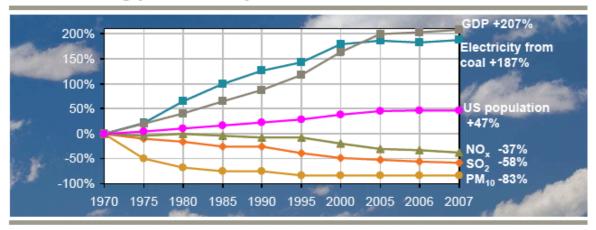
- South America: port infrastructure constraints; political instability; resource nationalism: growing regional coal burn
 - USA: supplier to Atlantic basin market available coal export capacity; imports into country declining
- Europe: coal production declining; growing coal burn in eastern Europe; traditional import supply avenues waning
- Russia: production challenges; growing domestic coal consumption; exports increasingly shifting to Asia-Pacific market
- South Africa: domestic power shortage; reserve degradation; exports increasingly shifting to Asia-Pacific market

Key Trends in Asia-Pacific Coal Markets

- Australia: severe port and rail bottlenecks may mask underlying labor and mine challenges; expanded capacity still may undershoot long-term Asian demand
- Indonesia: increasing domestic demand; export capacity dependent on congested river system
 - China: growth in domestic demand will likely push country to a net importer status over the next several years
 - Vietnam: growing domestic demand expected to reduce export supply
- India: imported coal needs projected to rise meaningfully; will pull available supply from Atlantic Basin markets

Source: ACI Slide 14

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

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

Obama-Biden unveil New Energy for America plan that includes clean coal technologies



"I am a big proponent of clean coal technology."

U.S. President-Elect Barack Obama



- · President-Elect Obama has announced plans to develop five "first-of-a-kind" commercial scale coal-fueled plants with carbon capture and sequestration technology
- The Obama Administration plans to create millions of new green jobs in five specific areas, including development and deployment of clean coal technologies

Source: "New Energy for America" plan, Obama.com, Change.gov and Google

Arch Coal is well-positioned for the future



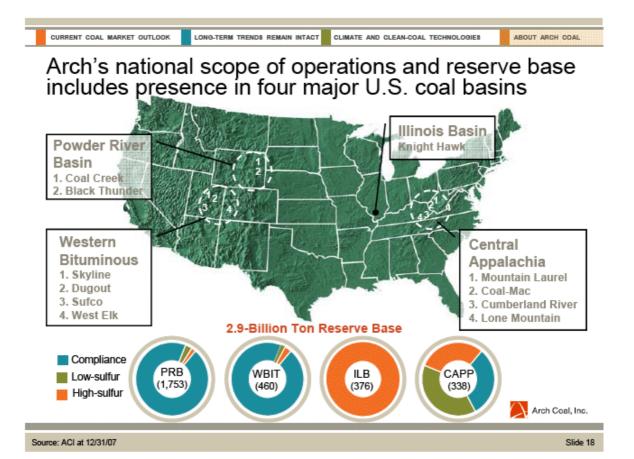




- One of the largest coal producers in the United States
- We supply roughly **12 percent** of the U.S. coal supply
 - Provide cleaner-burning, low-sulfur coal to fuel 6 percent of the nation's electricity
 - Ship coal to domestic and international steel manufacturers as well as international power producers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



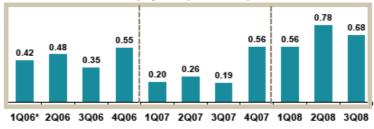
Slide 17 Source: ACI

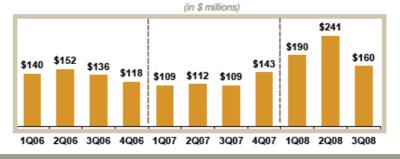


Arch is building a solid earnings track record, anticipates record earnings in 2008









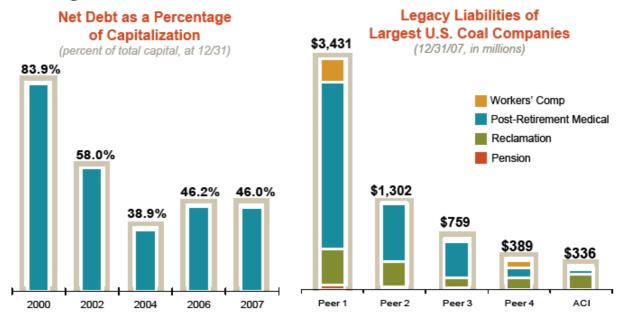


Source: ACI

* Adjusted for stock split

**EBITDA reconciliation is at end of presentation

Arch has one of the industry's strongest and cleanest balance sheets



- Available committed liquidity of \$660 million at 9/30
- Debt-to-cap ratio of 43% at 9/30



Source: SEC filings compiled by ACI

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 Quarterly Statistics through 2Q08, State-by-state reports through 9/30/08

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

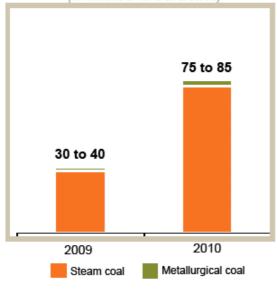
- Maintain strong balance sheet to support leveraged sales position
 - Go prompt or idle production in weak market cycles to preserve upside
 - Layered contracting strategies; use of trading to optimize asset base
- Re-align production and capital spending levels to match market
 - Match production targets and capital spend to our market expectations
 - Unpriced position provides market exposure without need for expansion capital
- Diligently manage controllable costs and preserve flexibility
 - Focus on cost control; increase operational flexibility
 - Offset cost pressures with productivity and process improvement initiatives
- Approach downturn as an opportunity for strategic efforts

Source: ACI

Arch's selective approach to signing new contracts retains future upside potential

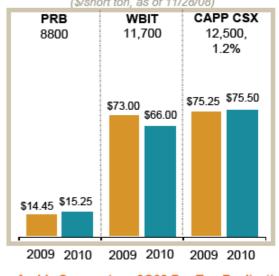
Arch Unpriced Volume

(in millions of tons at 9/30/08)



Forward Steam Coal Index Prices

(\$/short ton, as of 11/28/08)



Arch's Segments

3Q08 Per-Ton Realization \$11.21

\$26.76

\$78.95

Powder River Basin Western Bituminous Central Appalachia

Source: ACI, Argus Coal Daily's Physical Market Assessment

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

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.

Arch Coal, Inc. Adjusted EBITDA

	1Q 06	2Q 06	3Q 06	4Q 06
Net income	\$ 60,687	\$ 69,717	\$ 50,927	\$ 79,600
Income tax (benefit) expense	17,900	13,000	12,100	(35,350)
Interest expense, net	14,157	15,323	15,602	15,557
Depreciation, depletion and amortization	45,821	51,713	53,641	57,179
Debt extinguishment and other non-operating	1,393	1,808	3,572	674
			-	
Adjusted EBITDA	\$ 139,958	\$151,561	\$135,842	\$117,660
	1Q 07	2Q 07	3Q 07	4Q 07
Net income	\$ 28,724	\$ 37,552	\$ 27,280	\$ 81,373
Income tax (benefit) expense	4,650	(2,400)	5,100	(27,200)
Interest expense, net	16,587	18,280	16,638	20,760
Depreciation, depletion and amortization	57,620	57,990	58,628	67,824
Debt extinguishment and other non-operating	902	418	806	147
Adjusted EBITDA	\$ 108,483	\$111,840	\$ 108,452	- \$ 142,904
•				
	1Q 08	2Q 08	3Q 08	
Net income	\$ 81,147	\$112,997	\$ 97,848	
Income tax (benefit) expense	15,240	37,700	(26,881)	
Interest expense, net	20,063	18,253	16,784	
Depreciation, depletion and amortization	73,042	71,953	72,185	
Debt extinguishment and other non-operating		-	-	
Adjusted EBITDA	\$ 189,492	\$240,903	\$159,936	



Source: ACI











Raymond James 1st Annual Coal Investors Conference

Deck Slone, Vice President – Government, Investor & Public Affairs Arch Coal, Inc.

New York December 4, 2008