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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

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**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): September 10, 2009 (September 10, 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:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - 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))
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**Item 7.01 Regulation FD Disclosure.**

On September 10, 2009, Steven F. Leer, Chairman and Chief Executive Officer of Arch Coal, Inc., will deliver a presentation at the Barclays Capital CEO Energy/Power Conference in New York City 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<br>No. | Description   |
|----------------|---|
| 99.1           | Slides from the Barclays Capital CEO Energy/Power Conference. |

**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: September 10, 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

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99.1 Slides from the Barclays Capital CEO Energy/Power Conference.



Arch Coal, Inc.



## Barclays Capital 2009 CEO Energy/Power Conference

Steve Leer, Chairman and CEO  
Arch Coal, Inc.

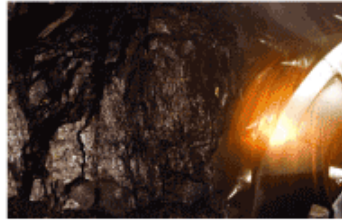
New York  
September 10, 2009

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## 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.



## State of Coal Markets

## Coal consumption will decline in 2009, but so will supply – setting the stage for the next market up-cycle

### Demand

- Arch expects an **unprecedented decline in U.S. coal consumption** in 2009 driven by a variety of macroeconomic and industry factors
  - Lower power demand due to mild weather and weak industrial activity in key coal consuming regions
  - Better performance in other baseload fuels – hydro and nuclear
  - Some fuel switching to natural gas
  - Reduced need for met coal domestically
  - Lower U.S. met and steam coal exports

### Supply

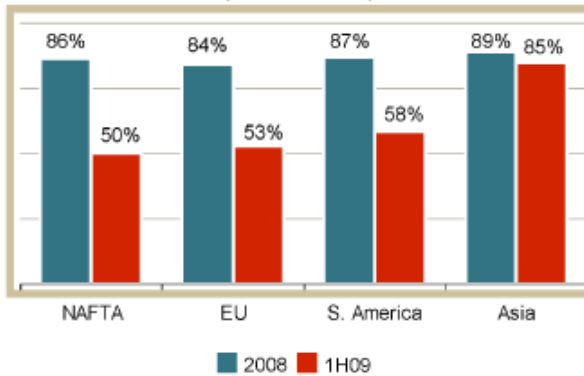
- Rebalancing of market through **supply rationalization**, which has accelerated as 2009 has progressed
  - Arch estimates that domestic coal production will decline by roughly 100 million tons in 2009
- Significant **capital spending reductions** across the coal space (and entire energy complex), which will impede future supply growth
  - Arch estimates that major coal producers have cut capital spend nearly 25% from 2008 levels



## Global and domestic metallurgical coal markets are beginning to show some signs of life

### World Steel Capacity Utilization

(in annualized %)

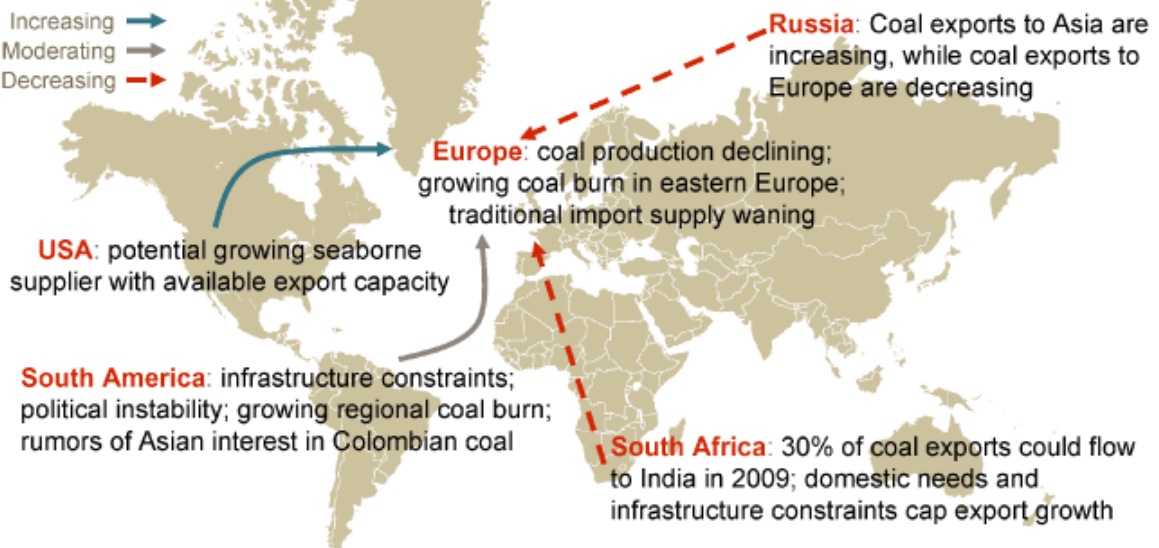


- Global economic recession severely impacted **steel production** during 4Q08 and 1H09
  - North American and European steel operations were hardest hit
  - Inventory de-stocking at steel centers
- Some **signs of life** emerging
  - Arch estimates that Chinese steel utilization grew to 97% of capacity in Aug. 2009, up from the low of 67% in Nov. 2008
  - U.S. steel utilization grew to 54% in Aug. from the low of 42% in Jan. 2009
  - ACI has seen an increase in inquiries from met coal customers across Asia, Brazil, U.S. and Europe

## Despite a temporary global downturn in coal demand, structural constraints and Asian demand pull remain

**Atlantic Basin Market = 43% of global seaborne trade in 2008**

Increasing →  
Moderating →  
Decreasing →

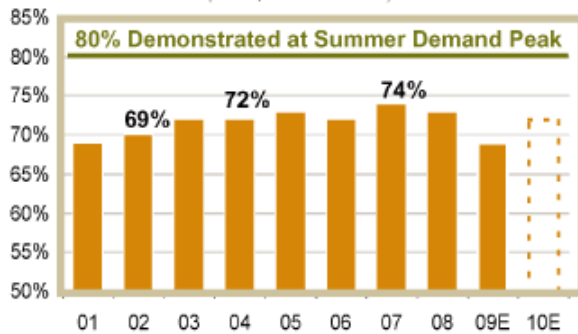


**What if 2008 repeats itself? Who will supply coal in Atlantic Basin?**

## U.S. coal consumption will resume growth, driven by increasing capacity utilization at existing plants

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

(% of plant utilization)



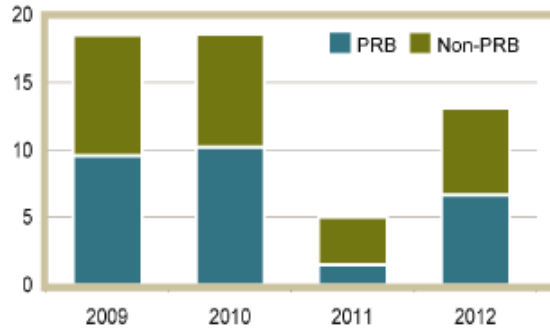
69% → 72% = + 48 millions tons  
 69% → 74% = + 80 millions tons  
 69% → 80% = +176 millions tons

- Power demand expected to decline an **unprecedented 4%** in 2009
- Coal demand has been **impacted disproportionately** – with consumption down 10% through June 2009
- As the U.S. economy recovers in 2010, coal demand should particularly benefit
  - A return to even modest 2004 consumption levels suggests that **coal consumption for power demand could rise 5-6%**

## U.S. coal consumption growth will also benefit from new plant start-ups

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

(in millions of tons)

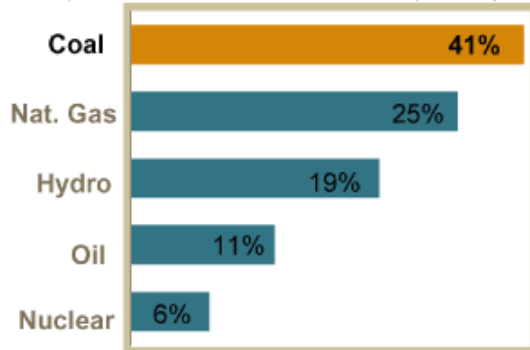


- Build-out of 16 GW through 2012 equates to **55 million tons** of new annual coal demand
- Arch estimates that the **Powder River Basin** will service one half of this demand
- Nearly **10 GW** – roughly 20 plants – are scheduled to be in operation by the end of 2010, representing roughly two-thirds of the total anticipated growth in annual coal demand from new plants

## Over the long term, energy demand fundamentals remain favorable

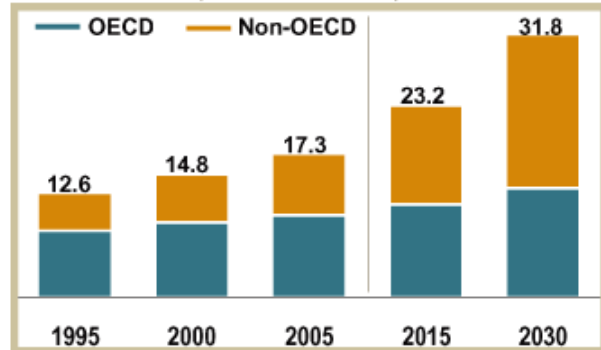
### Cumulative Percent Change in Global Energy Consumption

(2000-2008, in million tonnes of oil equivalent)



### Worldwide Electric Generation & Forecast

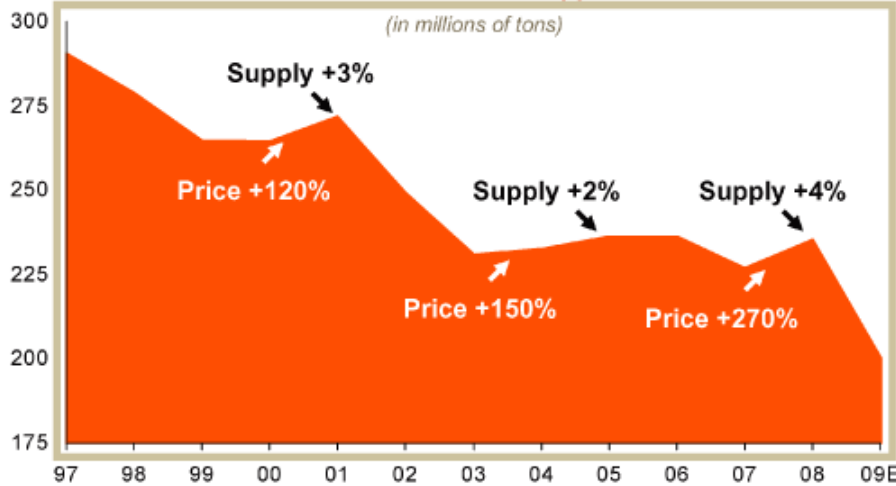
(billion kilowatt hours)



- Coal has been the **fastest-growing primary fuel source** on the planet since 2000
- **Developing and developed world** will continue to drive demand for coal
  - Population growth and increased electrification needs are key drivers
- Coal forecasted to be one-third of **incremental global fuel demand** through 2030

## In the U.S., coal production continues to shift westward as CAPP remains in long-term secular decline

### Production in Central Appalachia

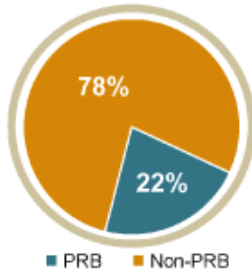


- Sharp price run-ups have acted to arrest production declines only temporarily
- Arch expects 2009 CAPP production to be down **90 million tons** from '97 peak level
- Based on historical trend, most of that supply reduction is likely to be **permanent**

## Since 1990, PRB coal has gained significant market share east of the Mississippi River

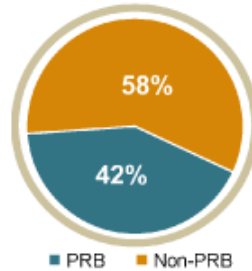
### Border States East of Mississippi River <sup>(1)</sup>

Burn by Coal Type circa 1990



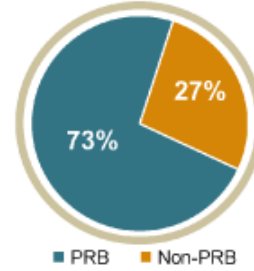
- Eastern border state power plants in Wisconsin, Illinois, Tennessee and Mississippi historically burned a small mix of PRB coal

Burn by Coal Type circa 1995



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

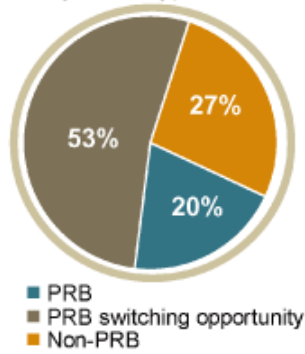
Burn by Coal Type circa 2008



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

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

**Non-Border States  
East of Mississippi River**  
*Burn by Coal Type circa 2008*



Eastern power plants in non-border states are generally comparable in design to plants in the border states

Non-border state plants should be able to increase their PRB coal use greatly with minimal investment

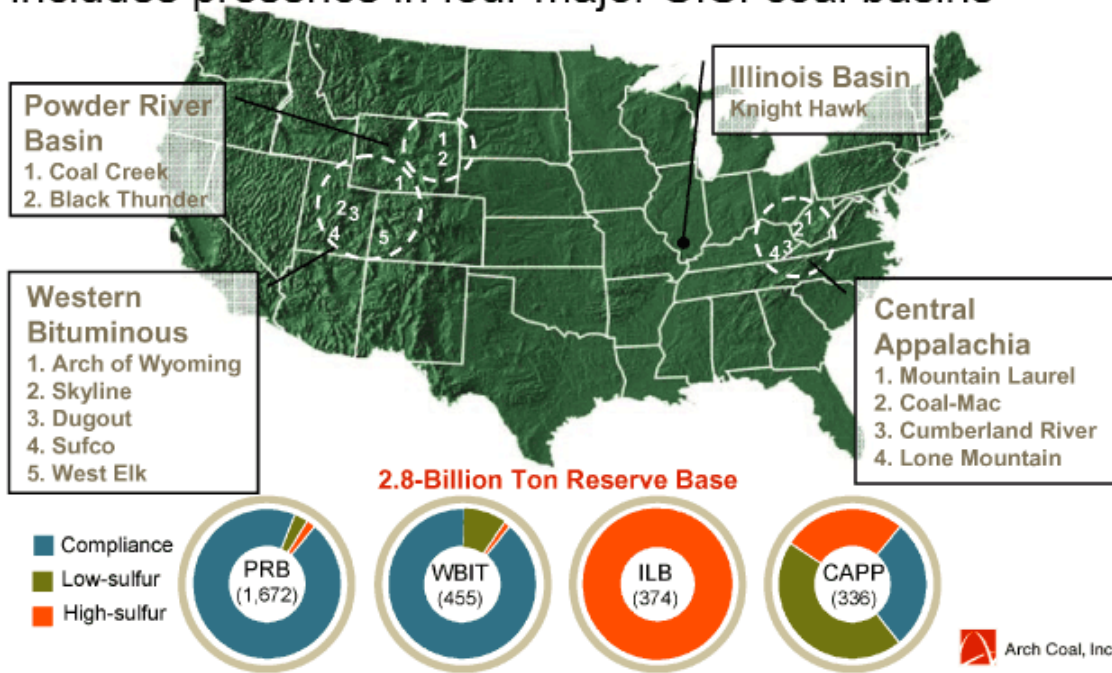
Based on historical switching in the border states and the lower heat content of PRB coal, the theoretical PRB switching opportunity in the East exceeds 300 million tons





## Arch Coal Overview

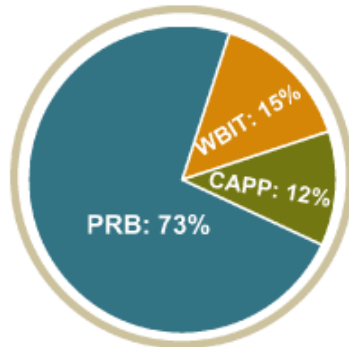
## Arch's national scope of operations and reserve base includes presence in four major U.S. coal basins



## Arch's mine portfolio underscores value of diversity

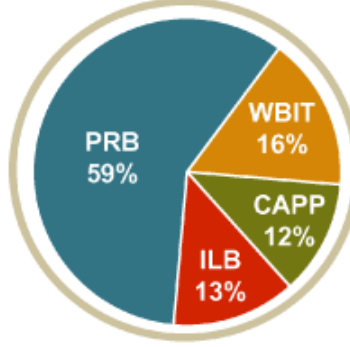
### 2008 Tons Sold

(percent of total tons by region)



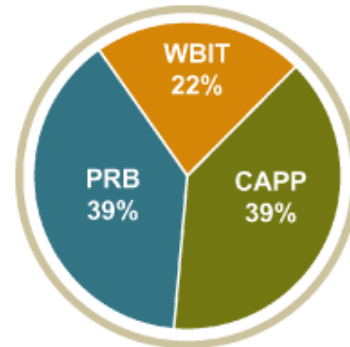
### 2008 Reserves

(percent of total reserves by region)



### 2008 Revenues

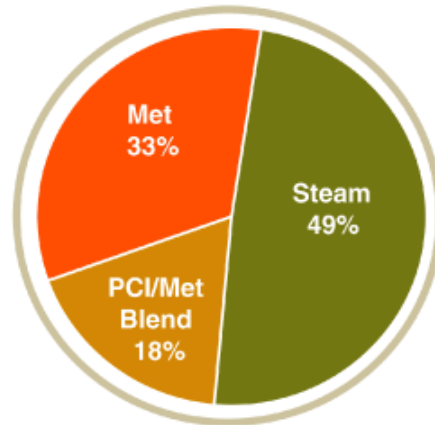
(percent of segment revenue by region)



- Arch's **national network of mines** services a **diverse customer base**
  - 175 coal-fueled power plants
  - Customers spread across 35 states and 21 countries
  - Customer sales split 52% and 48% east and west of the Mississippi, respectively

## Arch is also a leading producer of met and PCI coal – with the potential to boost sales in a robust market

**Central Appalachian Product Profile**  
(based on 15 million tons of productive capacity)

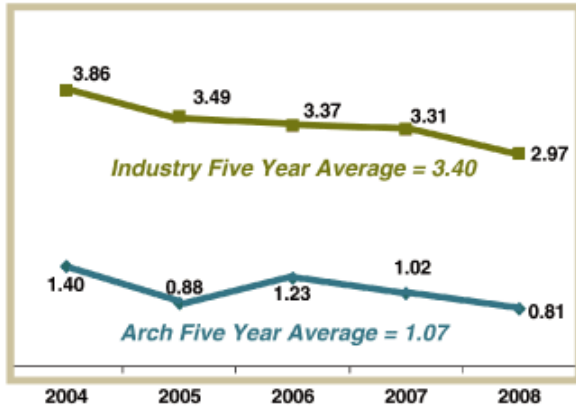


- Based on 2008 shipments, Arch is the **fifth largest** U.S. met coal producer
  - Top nine domestic metallurgical coal suppliers represent 75% of U.S. met coal supply
- In a robust, sustained market, Arch's met shipments **could rise significantly**

## 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

## Arch is taking steps to strengthen its position during a weak market environment

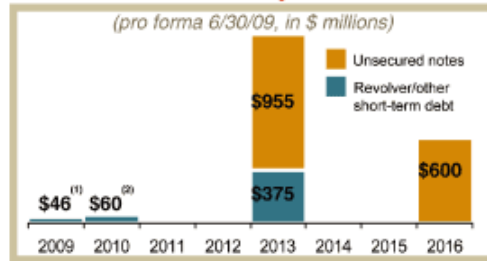
- Reducing **production** and **capital spending** to align with weak market conditions
  - Preserve future value of reserve base
- Diligently managing our **liquidity** and balance sheet to ensure adequate cushion
- Remaining patient in **sales contracting**
  - Layer in sales as market rebounds
  - Use of trading to optimize asset base
- Focusing on **long-term growth** opportunities
  - Announced acquisition of Rio's Jacobs Ranch
  - Permitting new Lost Prairie reserves in Illinois



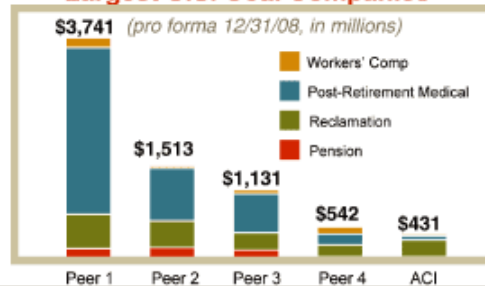
## Arch maintains one of the strongest and cleanest balance sheets in the U.S. coal industry

- Arch's financing initiatives have enhanced **liquidity** and **extended debt** maturities
  - Credit amendment increases borrowing capacity through June 2011 and extends its maturity to 2013
  - Nearly all 2009 and 2010 maturities are borrowings under short-term credit facilities that can be renewed
- Successfully completed two **capital markets transactions** that netted nearly \$900 million
  - \$600 million of 8.75% senior unsecured notes due 2016
  - Issued 19.55 million common shares for \$326 million
  - Use proceeds to finance the Jacobs Ranch acquisition
- Arch maintains one of the **strongest** and **cleanest balance sheets** in the industry
  - Lowest level of legacy liabilities among coal peers
  - Roughly 60% of Arch's legacy liabilities are comprised of reclamation liabilities

**Debt Maturity Profile**



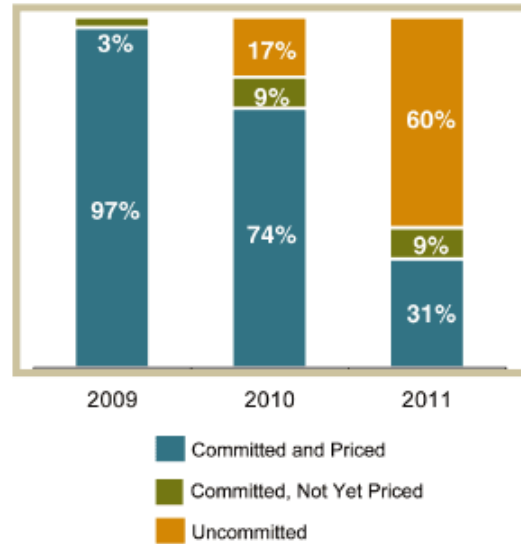
**Legacy Liabilities of Largest U.S. Coal Companies**



## Arch is profitably managing through trough of energy market cycle – and is well positioned for recovery

- Arch employs a pragmatic, **market-driven coal pricing strategy**
- We remain committed to maintaining near-term stability in our earnings
  - Substantially all of our remaining volumes for 2009 are committed
- We also strive to preserve long-term earnings growth by allowing the company to layer in future volumes at attractive levels

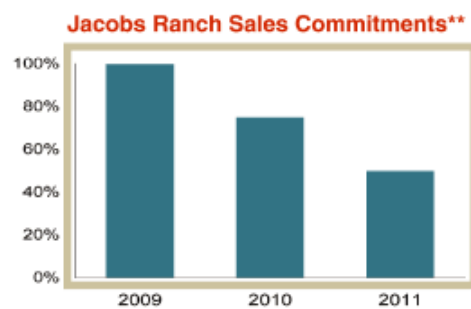
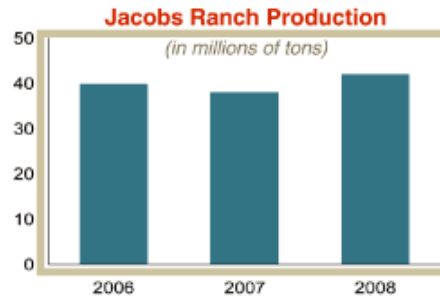
Arch Committed Tonnage as of 6/30/09\*





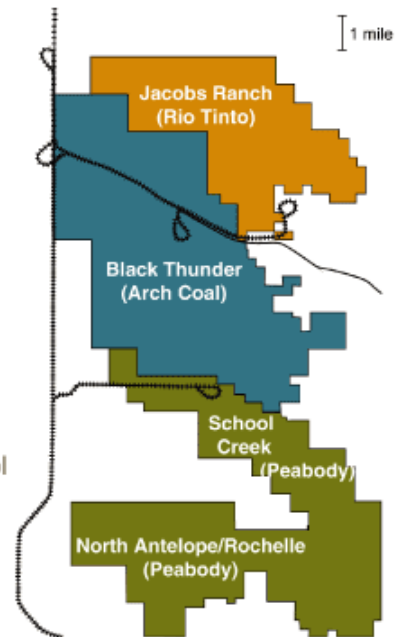
## In March 2009, Arch announced plans to acquire the Jacobs Ranch mine in the Powder River Basin

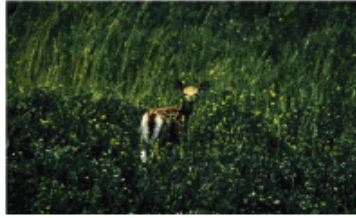
- Purchase price of **\$761 million**
- **381 million** tons of low-cost reserves (at 12/31/08) contiguous to Black Thunder
- Jacobs Ranch sold **42 million tons** in 2008
  - Average quality over 8,800 Btu per pound
  - Sulfur-dioxide content < 1 lb per million Btu
- Purchase includes major **mining equipment**
- **Workforce** of 600 at Jacobs Ranch
- Jacobs Ranch would have contributed incremental EBITDA\* of **\$145 million to \$165 million** for Arch in 2009, assuming a closing date of Dec. 31, 2008



## The integration of Jacobs Ranch into Arch's flagship Black Thunder mine will create substantial value

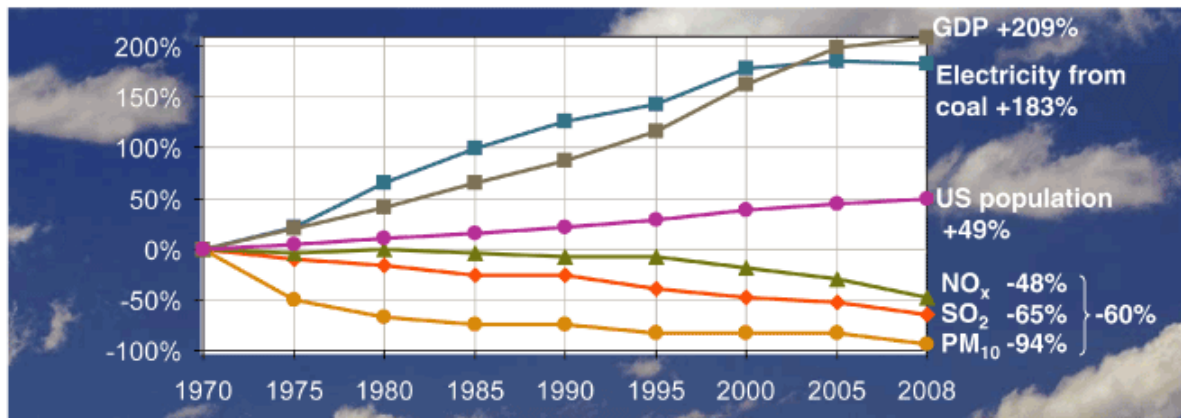
- Jacobs Ranch offers compelling strategic rationale
  - Shares a **6-mile property line** with Black Thunder
  - High-quality reserves with **competitive mining costs**
- Integration will create one of the world's **largest and most efficient mining complexes**
  - Optimization of combined equipment fleet
  - Increased utilization of expanded coal handling system and state-of-the-art rail loadout
  - Greater flexibility in product blending and quality control
  - Inventory management and purchasing efficiencies
  - Reduced net capital expenditures





## Energy, the environment and clean coal technologies

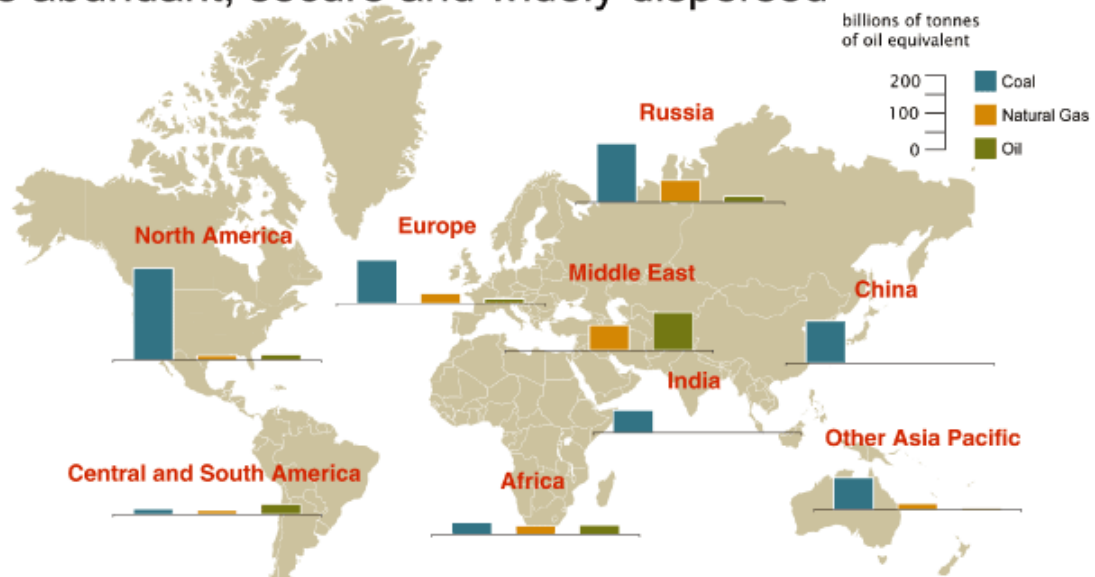
## The U.S. has met its environmental objectives while tripling GDP and coal-based electricity use



- Since 1970, coal has been used in increasingly clean ways in the United States
  - Technology has allowed the nation to grow its economy *and* reduce emissions
- Higher efficiency rates and **carbon capture technologies** create opportunities for reducing carbon intensity as well



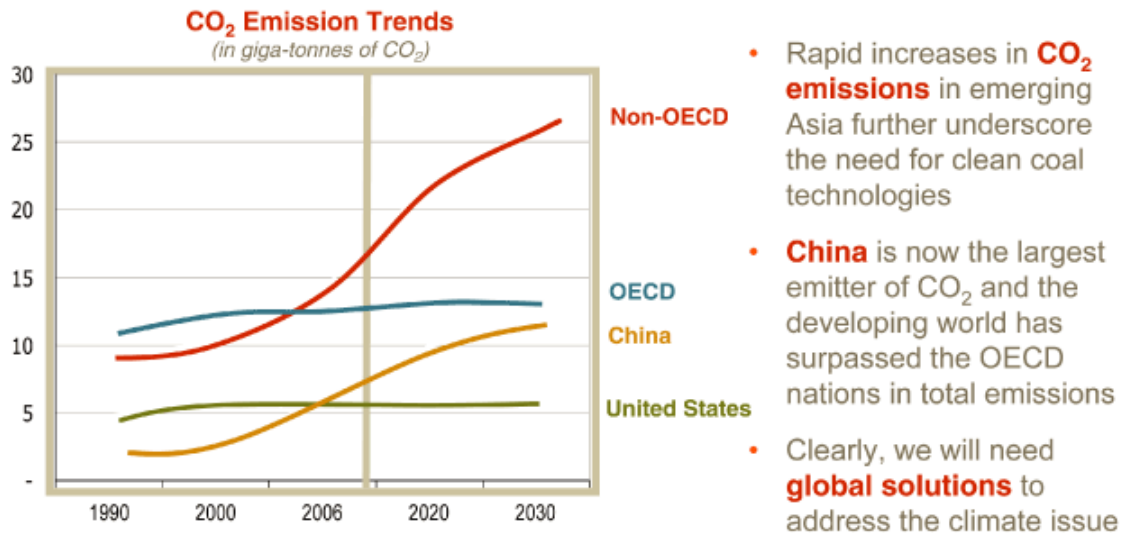
# Coal's use should grow globally since the fuel is abundant, secure and widely dispersed



Based on current production levels and proven reserves, coal should outlast both gas supplies and oil reserves by **more than 3 times**



## The developed and developing world must work together to address the climate challenge



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

SCHOOL OF

### energy resources



- Arch has invested \$8 million in university research programs as well as government and industry pilot projects dedicated to **clean coal research**

UNIVERSITY  
OF WYOMING



- Advancing clean coal technologies is **essential**
  - Developed and developing economies will continue to grow coal use to meet electrification needs
  - Development and deployment of carbon capture and storage solutions can help **address climate challenge**
  - World leaders increasingly recognize the importance of funding clean coal research (U.S. stimulus package and Waxman-Markey bill provide **funding for CCS**)

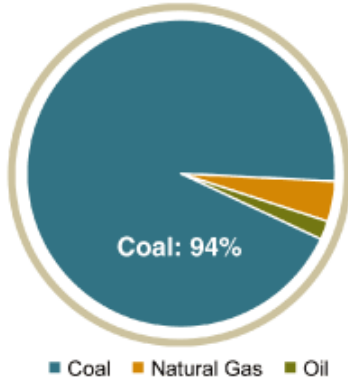


Washington University in St. Louis

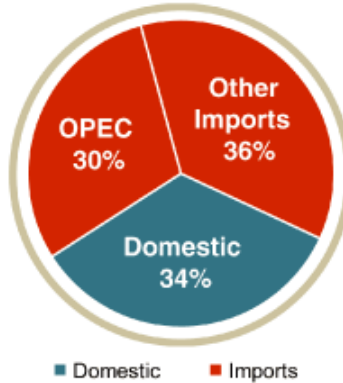
U.S. Department of Energy  
**National Carbon Capture Center**

## Coal will remain a vital part of America's energy future

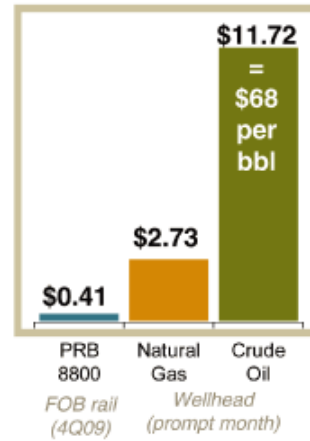
**U.S. Energy Reserves**  
(in trillion Btu)



**U.S. Petroleum Supply**  
(million barrels per day, 2008)



**U.S. Fuel Prices**  
(\$/million Btu at 9/04/09)





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## 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.

Adjusted EBITDA is defined as net income before the effect of net interest expense; income taxes; our depreciation, depletion and amortization; expenses resulting from early extinguishment of debt; and other non-operating expenses.

Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded to calculate Adjusted EBITDA are significant in understanding and assessing our financial condition. Therefore, Adjusted EBITDA should not be considered in isolation nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. We believe that Adjusted EBITDA presents a useful measure of our ability to service and incur debt based on ongoing operations. Furthermore, analogous measures are used by industry analysts to evaluate operating performance. Investors should be aware that our presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies. The table below shows how we calculate Adjusted EBITDA.

**Reconciliation of pro forma Adjusted EBITDA to Income from operations for Jacobs Ranch for the 12 months ended December 31, 2009**

|  | Targeted Results<br>Year Ended<br>December 31, 2009 |                   |
|--|---|-------------------|
|  | Low   | High              |
|  | (Unaudited)   |                   |
| Income from operations                   | \$ 60,000   | \$ 70,000         |
| Depreciation, depletion and amortization | 85,000  | 95,000            |
| Adjusted EBITDA                          | <u>\$ 145,000</u>                                   | <u>\$ 165,000</u> |

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Source: ACI

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Arch Coal, Inc.



## Barclays Capital 2009 CEO Energy/Power Conference

Steve Leer, Chairman and CEO  
Arch Coal, Inc.

New York  
September 10, 2009