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): April 22, 2010 (April 22, 2010)

Arch Coal, Inc.

(Exact name of registrant as specified in its charter)

Delaware	1-13105	43-0921172
(State or other jurisdiction of incorporation)	(Commission File Number)	(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 April 22, 2010, Steven F. Leer, Chairman and Chief Executive Officer of Arch Coal, Inc. (the “Company”), will deliver a presentation at the Company’s 2010 annual stockholders’ meeting. The slides from the presentation are attached as Exhibit 99.1 hereto and are hereby incorporated by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibits are attached hereto and filed herewith.

Exhibit No.	Description
99.1	Slides from the presentation at the 2010 annual stockholders’ meeting.

Signatures

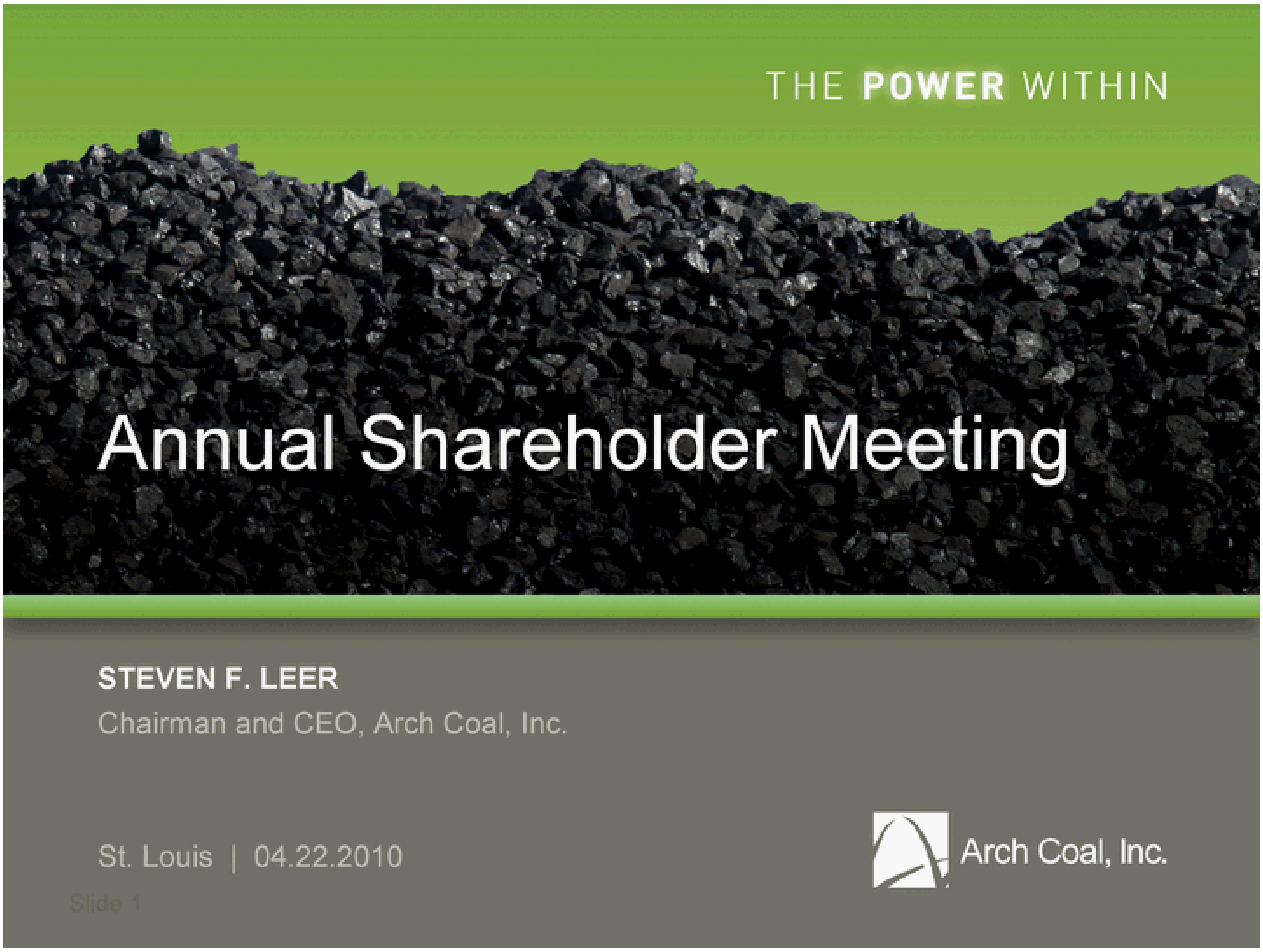
Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: April 22, 2010	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 2010 annual stockholders’ meeting.

Exhibit 99.1


THE POWER WITHIN
Annual Shareholder Meeting
STEVEN F. LEER
Chairman and CEO, Arch Coal, Inc.
St. Louis | 04.22.2010
Arch Coal, Inc.
Slide 1

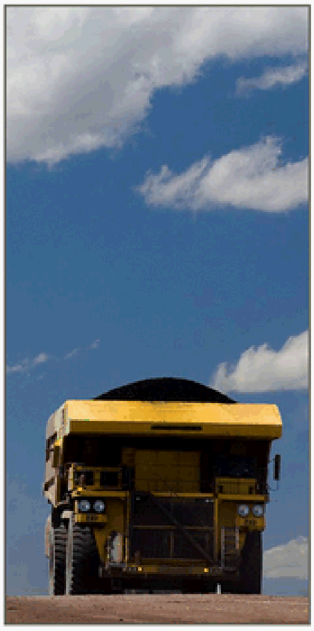
Forward-Looking Information

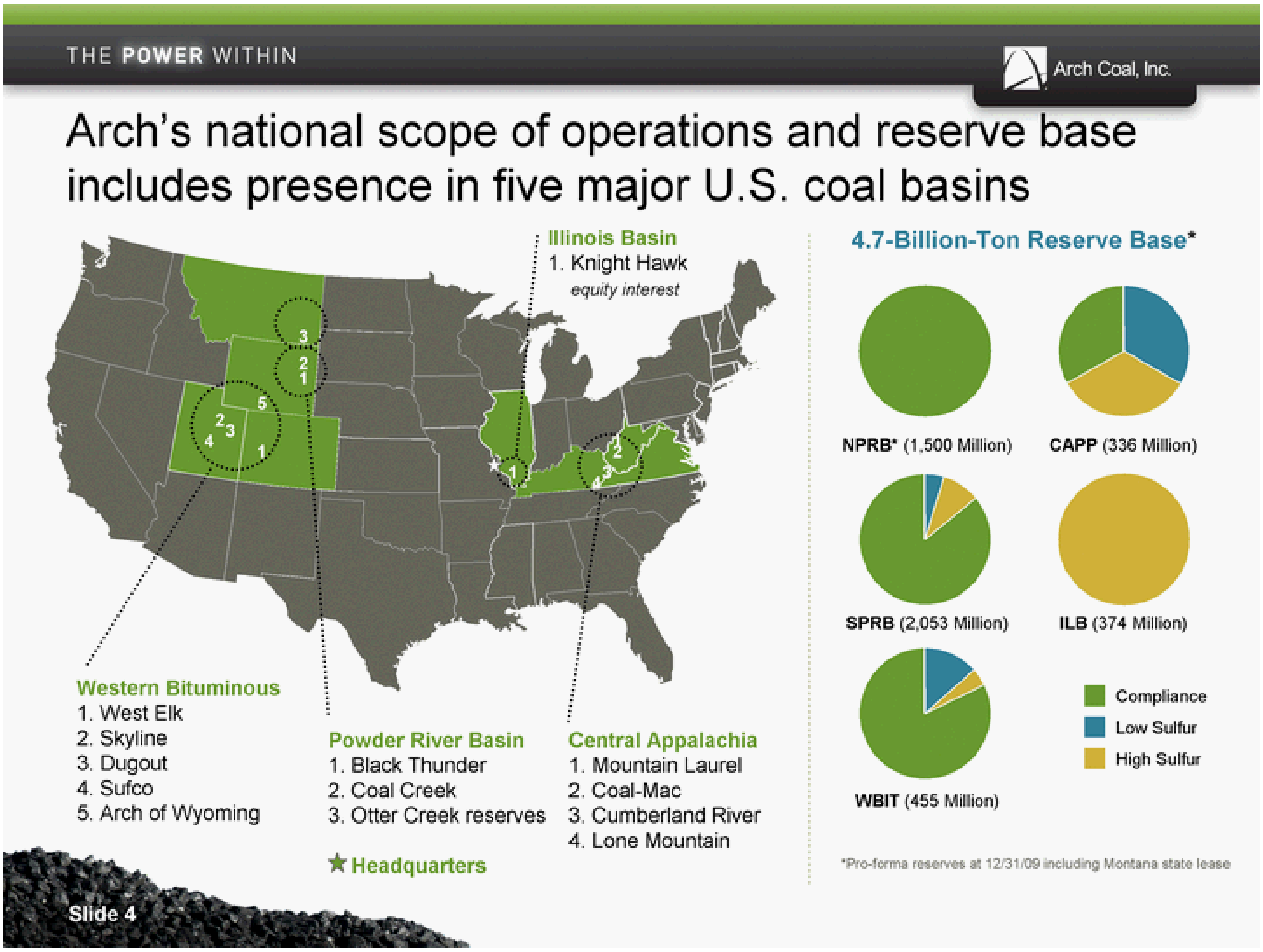
This presentation contains "forward-looking statements" – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as "expects," "anticipates," "intends," "plans," "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.

Today Arch Coal is bigger and better than ever

- **Second largest** coal producer in the U.S.
  - Leading U.S. position in all three major low-sulfur coal basins
  - Significant exposure to metallurgical markets
  - Diversified reserve portfolio of 4.7 billion tons
- Represent **16 percent** of the U.S. coal supply
  - Provide cleaner-burning, low-sulfur coal to 183 domestic power plants in 39 states to fuel 8 percent of the nation's electricity
  - Ship coal to domestic/international steel manufacturers and international power producers
- Lead coal industry in **mine safety** and **environmental compliance**
  - Talented workforce operates large, modern mines

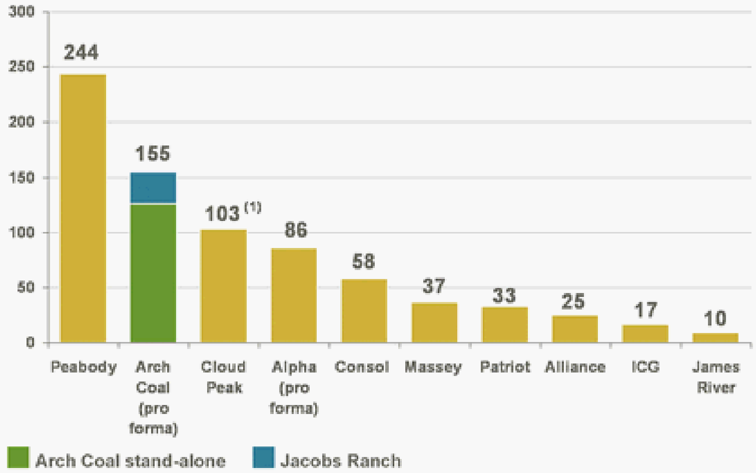



THE POWER WITHIN
Arch Coal, Inc.
Arch's national scope of operations and reserve base includes presence in five major U.S. coal basins
Illinois Basin
1. Knight Hawk
equity interest
4.7-Billion-Ton Reserve Base*
NPRB* (1,500 Million)
CAPP (336 Million)
SPRB (2,053 Million)
ILB (374 Million)
WBIT (455 Million)
Compliance
Low Sulfur
High Sulfur
Western Bituminous
1. West Elk
2. Skyline
3. Dugout
4. Sufco
5. Arch of Wyoming
Powder River Basin
1. Black Thunder
2. Coal Creek
3. Otter Creek reserves
Central Appalachia
1. Mountain Laurel
2. Coal-Mac
3. Cumberland River
4. Lone Mountain
Headquarters
*Pro-forma reserves at 12/31/09 including Montana state lease
Slide 4

Arch is a top producer in each of nation's key low-sulfur coal-producing basins

2009 Tons Sold

(in millions of tons)

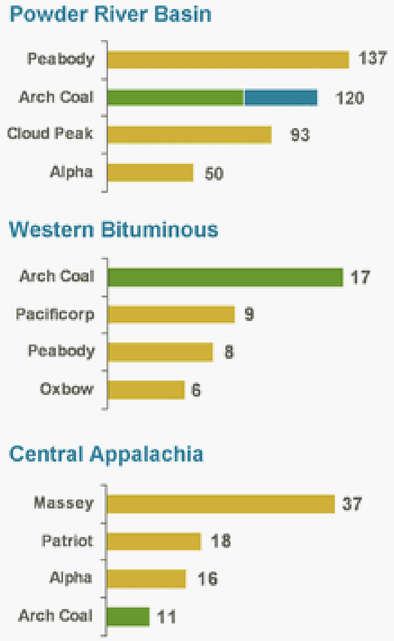


(1) Includes roughly 10 million tons of brokered coal from Jacobs Ranch

Source: ACI, Ventyx, SEC filings

2009 Tons Produced

(in millions of tons, excludes brokerage)

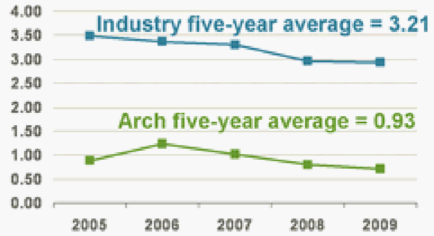


In 2009, we set new records and made further progress toward our company vision

- Record **safety** lost-time and total incident rates
  - 10 subsidiary mines and facilities achieved zero lost-time incidents
  - Four operations completed three-plus years without a lost-time injury
  - Earned 12 national and state awards for safety excellence
- Record **environmental** compliance
  - Received 11 total SMCRA violations – a 22% improvement over 2008
- “In the black” **financial** performance
  - Despite recession, ACI recorded a profit in 2009
  - Focused on cost-containment and optimization
  - Maintained one of the industry’s strongest, cleanest balance sheets

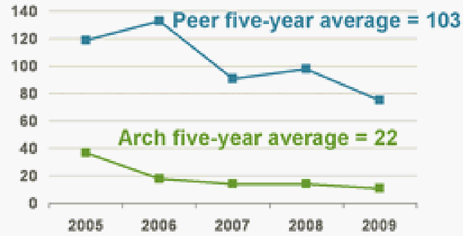
Lost-Time Safety Incident Rate

(per 200,000 employee-hours worked)



Environmental Compliance

(SMCRA violations based on state reports)



Sources: ACI, MSHA, State environmental agencies

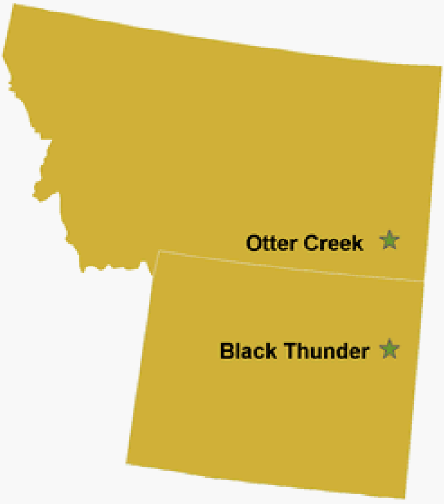
Arch's large and modern mines are among the nation's most productive

- **Strong productivity** rates in 2009 despite lower production targets
- All of Arch's longwall operations ranked among **top 20** most productive in 2009
- Black Thunder mine's combined 2009 productivity rate of 30 tons per employee-hour was **282% better** than the national surface mine average
- Operations **further optimizing** to increase efficiencies and reduce costs

2009 Coal Mine Productivity
(tons per employee-hour)

Source: Ventyx

Expanded presence in expansive Powder River Basin provides future organic growth opportunities

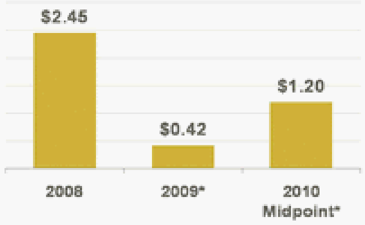


Source: ACI and Ventyx

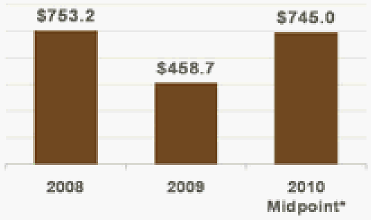
- Arch recently completed **strategic investments** in Wyoming and Montana
  - Black Thunder integration of former Jacobs Ranch mine
  - Secured Otter Creek coal reserves from GNP and state of Montana
- The assets acquired are located in the Northern and Southern PRB, which represent the **lowest cost** and **largest** coal supply regions in the United States
- PRB coal continues to expand market share east of Mississippi River
- PRB **will help fill supply gap** created by Appalachia
- Growing interest in expanding PRB **exports** off the west coast

Arch expects to generate stronger earnings in 2010

Earnings Per Share
(per diluted share)



Adjusted EBITDA
(in $ millions)



Source: ACI 2010 midpoint estimates at 4/19/10

*Excluding acquisition charges and sales contract amortization

- We recorded a **2009 profit** despite the global recession and a rapid 11% decrease in U.S. coal demand
- Arch continues to execute a **market-driven approach**, leaving coal in the ground and focusing on business efficiency, cost-containment
- Capital expenditures in 1Q10 were the **lowest level** in six years
- In 2010, we expect to generate **stronger earnings** per share and EBITDA thanks to improving coal markets
- First quarter **revenues grew** 4.5 percent in 1Q10 versus 1Q09, while cash flow from operations increased 63 percent

*Adjusted EPS and EBITDA is defined and reconciled at end of presentation

Despite scrutiny of fossil fuels, we believe policy makers increasingly recognize coal's essential role

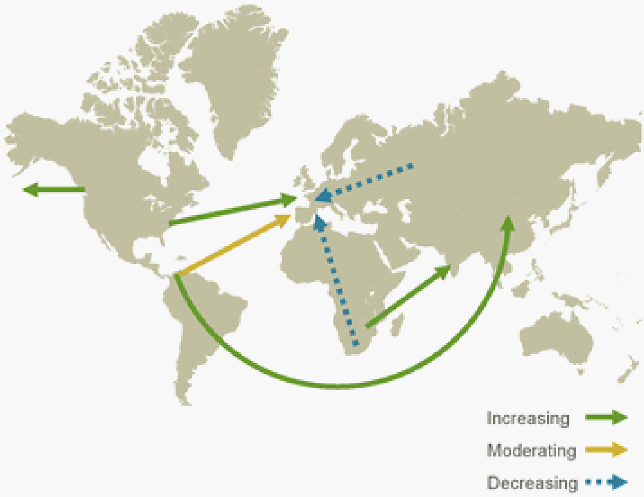
- While prospects for comprehensive climate legislation in 2010 have dimmed, there is strong and growing support for **clean coal technologies**
  - The ACES bill that passed the House would have provided up to **$200 billion** for CCS
  - Senators Rockefeller and Voinovich are currently pursuing a stand-alone bill with significant **CCS funding**
- Prospects are better for an **"energy only" bill** that seeks to boost energy efficiency while providing support for renewables and CCS
- Meanwhile, EPA is taking steps to **regulate** greenhouse gases and further restrict other emissions from power plants
- Despite challenges, we expect **coal will maintain its position** as the primary source of electricity generation in the U.S. for decades to come

Keep America Energized

ARCH COAL, INC.

Global coal supply flows continue to shift – and create further opportunities for U.S. met/steam coal exports

Atlantic Basin Market ~ 36% of Global Seaborne Trade in 2009



USA: potential growing seaborne supplier with available export capacity; emerging supplier to Pacific Rim

South America: infrastructure constraints; political instability; growing regional coal burn; emerging supplier to Pacific Rim

Russia: coal exports to Asia are increasing, while coal exports to Europe are decreasing

Europe: coal production declining; growing coal burn in eastern Europe; traditional import supply waning

South Africa: 30% of coal exports moved to India in 2009; domestic needs and infrastructure constraints limit export growth

Who will supply coal in Atlantic Basin during the next market up-cycle?

Coal was disproportionately impacted by downturn in 2009; should outperform other fuels in recovery

Incremental U.S. Coal Consumption and Supply
(in millions of tons)

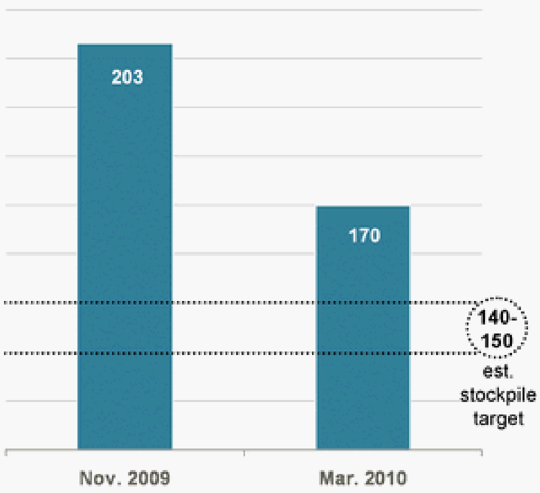
		2009		2010E
Economy	↓	55 – 65	↑	20 – 25
Weather	↓	25 – 35	↑	25 – 30
Natural Gas	↓	20 – 30	↑	15 – 20
Hydro	↓	3 – 5	↑	1 – 2
Nuclear	↓	1 – 3	↑	0 – 2
Total Demand	↓	120	↑	60 – 80
Supply	↓	97	↓	0 – 20
Surplus/**Deficit**	↑	23	↓	**~80**

Source: EIA

U.S. coal stockpiles are being liquidated much faster than anticipated

Estimated Coal Stockpile Levels at U.S. Power Generators

(in millions of tons)

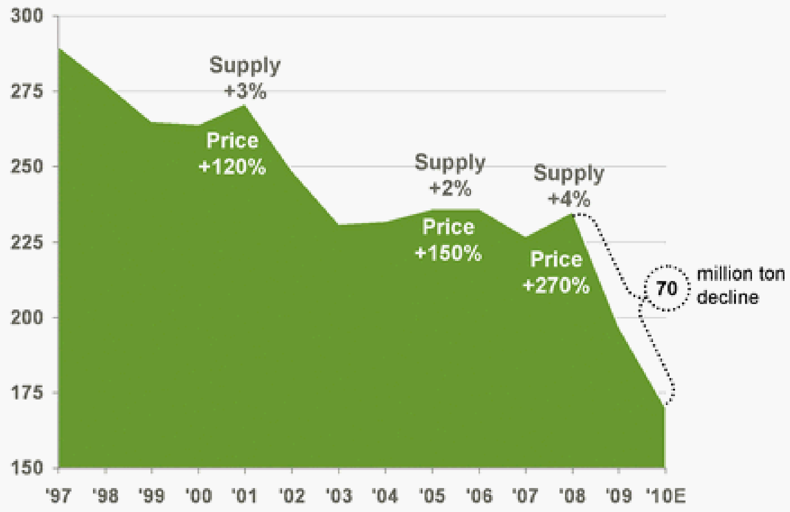


Source: EIA and ACI

- During the shoulder season, Arch anticipates a **smaller build in stockpiles** versus previous years
- **PRB stockpiles are the lowest in the country** and approaching normal levels … translating into improvement in the forward curve index pricing … with pressure building for additional price movement much earlier in this market up-cycle

U.S. coal production continues to shift westward as Central Appalachia is in long-term decline

Production in Central Appalachia
(in millions of tons)



Source: Coal Daily Price Indices (CAPP 12,000 Btu / 1% Sulfur / CSX) and Ventyx

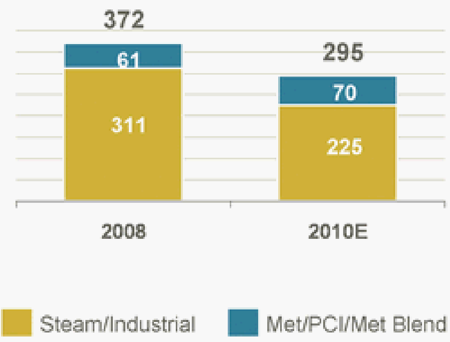
- **Sharp price run-ups** have acted to arrest production declines only temporarily
- Based on historical trend, most of that **supply reduction** is likely to be **permanent**
- The 2008 – 2010 drop is shaping up to be the **largest decline in production** yet

Competition is set to increase for constrained coal supply in Northern and Central Appalachia

- Nearly **90 million tons** of high-Btu Appalachian production could disappear from steam coal markets or migrate to higher margin met coal markets
- Other coal basins will need to fill the supply gap left by the Appalachia basin

Northern and Central Appalachia Coal Production

(in millions of tons)



Source: EIA and ACI

Powder River Basin should fill most of the supply gap from the Appalachian basins over the next five years

Powder River Basin

- **Lowest cost** and **largest** coal supply region in the United States
- Consistent with history, **PRB will be called upon to fill supply gap** created by Appalachia
- Replacing 90 million tons of Appalachian coal would require more than 120 million tons of PRB coal on a Btu-equivalent basis
- Would represent the most profound call on PRB yet

Illinois Basin

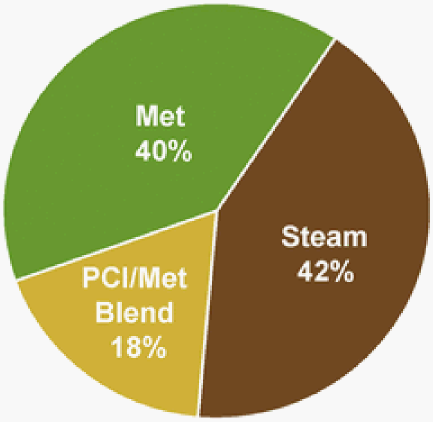
- **Positive long-term outlook … but with challenges**:
  - Much higher cost than PRB
  - Capital investment required will be significant
  - Long lead time for permitting and project development
  - Some areas contain difficult geology
  - Quality disadvantage (particularly chlorine) in certain regions

Northern App

- Limited growth potential
- High sulfur content
- **Export pull** for steam and crossover met products will further reduce supply available to domestic power generators

Arch is a leading producer of met and PCI coal – with plans to expand position further

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



- Arch's low-cost production profile is geared towards serving **high margin met market** as well as high quality **Eastern power** and growing **seaborne steam** market
- In the current met market, Arch's **met shipments should increase meaningfully**
- Arch plans to invest modest capital in 2010 to **add met production** at Cumberland River – increasing total met capabilities to approach **8 million tons per year**

Arch is strongly positioned for the recovering domestic coal market

- Arch employs a pragmatic, **market-driven pricing strategy**
- We remain committed to maintaining near-term stability in earnings
  - Effectively sold out for 2010; retain some price exposure
- We also strive to preserve our long-term earnings leverage by retaining the **flexibility to layer** in future volumes at attractive levels

Arch Unpriced Tonnage
(as of 3/31/10, in millions of tons)

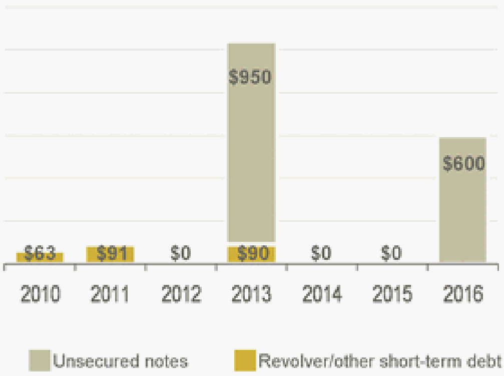
THE **POWER** WITHIN

Arch Coal, Inc.

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

Debt Maturity Profile

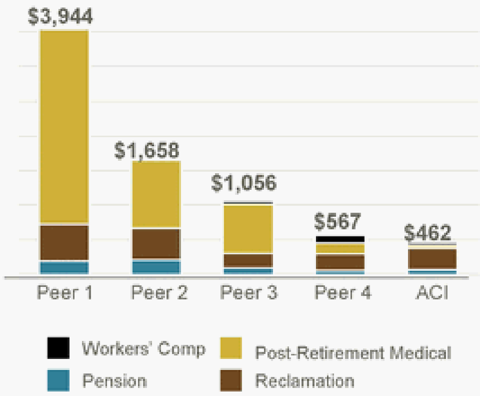
(at 3/31/10, in $ millions)



- Financing initiatives in 2009 enhanced **liquidity** and extended **debt** maturities
- Available liquidity is more than $700 million

Legacy Liabilities of Largest U.S. Coal Companies

(at 12/31/09, in $ millions)

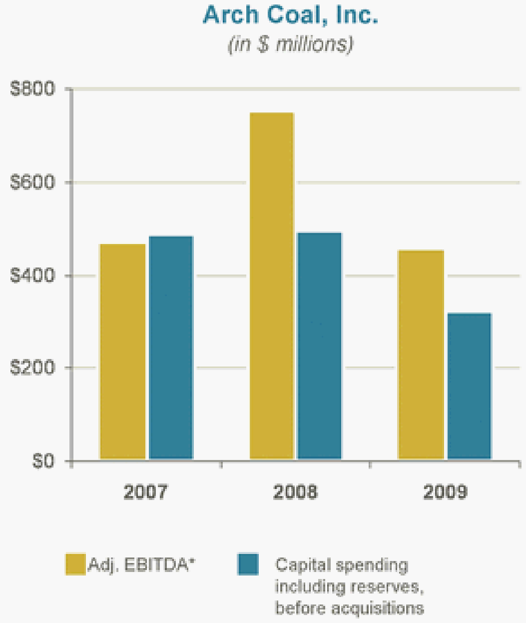


- **Low level** of legacy liabilities vs. peers
- Two-thirds of Arch's legacy liabilities are comprised of reclamation liabilities

Source: ACI and peer SEC filings

With major expansion plans completed, Arch is focused on generating free cash flow

- From 2004-2007, Arch completed a large capital spending program that supported organic growth initiatives
- Looking ahead, Arch will **maintain rigorous capital and cost control** – with a focus on growing free cash flow in 2010 and beyond
- Arch will evaluate all priorities for utilizing **free cash flow**, including:
  - Debt pay down
  - Dividends
  - Share repurchase
  - Re-investing in the business through organic growth and acquisition opportunities
  - Investments to expand market for coal (coal conversion technologies)



*Adjusted EBITDA is defined and reconciled at end of presentation

We carefully align our business goals with our core values

- Strengthening top safety record by sharing best practices inside and out
- Investing $14 million for underground communication and tracking systems

- Providing solutions to help address growing demand for energy worldwide
- Investing in technology leaders to identify cleaner ways to use coal, such as Trailblazer Energy Center and ADA-ES

- Serving growing domestic and global markets: 21 countries served since 2008
- Generating estimated ’10 EBITDA of between $700 million and $790 million

Non-GAAP Measures Reconciliation Chart

Included in the accompanying presentation, we have presented Adjusted Earnings Per Share and Adjusted EBITDA, which are are considered non-GAAP measures as defined by Regulation G. The following reconciles these items to net income as reported under GAAP.

Adjusted diluted earnings per common share is adjusted for the after-tax impact of acquisition-related expenses and is not a measure of financial performance in accordance with generally accepted accounting principles. Adjustments made to arrive at these amounts are significant in understanding and assessing our financial condition. Therefore, adjusted diluted earnings per share should not be considered in isolation nor as an alternative to diluted earnings per common share under generally accepted accounting principles. We believe that adjusted diluted earnings per common share better reflects the trend of future results.

Adjusted EBITDA is defined as net income before the effect of net interest expense; income taxes; our depreciation, depletion and amortization; epenses 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.

Adjusted Earnings Per Share

	Year Ended December 31, 2009 (Unaudited)	Targeted Results Year Ended December 31, 2010	
		Low	High
		(Unaudited)	
Net income attributable to Arch Coal	$ 42,169	$ 141,500	$ 205,000
Amortization of acquired sales contracts, net	19,623	34,000	36,000
Costs related to acquisition of Jacobs Ranch	13,726	-	-
Tax impact of adjustments	(12,172)	(12,410)	(13,140)
Adjusted net income attributable to Arch Coal	$ 63,346	$ 163,090	$ 227,860
Diluted weighted average shares outstanding	151,272	163,000	163,000
Adjusted diluted earnings per share	$ 0.42	$ 1.00	$ 140.00

Adjusted EBITDA

	Year Ended December 31,		Targeted Results Year Ended December 31, 2010	
	2008	2009	Low	High
	(Unaudited)		(Unaudited)	
Net income attributable to Arch Coal	$ 354,330	$ 42,169	$ 141,500	$ 205,000
Income tax expense (benefit)	41,774	(16,775)	13,500	36,000
Interest expense, net	64,285	98,310	139,000	135,000
Depreciation, depletion and amortization	293,553	301,608	372,000	378,000
Amortization of acquired sales contracts, net	(705)	19,623	34,000	36,000
Costs related to acquisition of Jacobs Ranch	-	13,726	-	-
Adjusted EBITDA	$ 753,237	$ 458,661	$ 700,000	$ 790,000