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): September 15, 2010 (September 15, 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 September 15, 2010, 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. 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 Barclays Capital CEO Energy/Power Conference.

Signatures

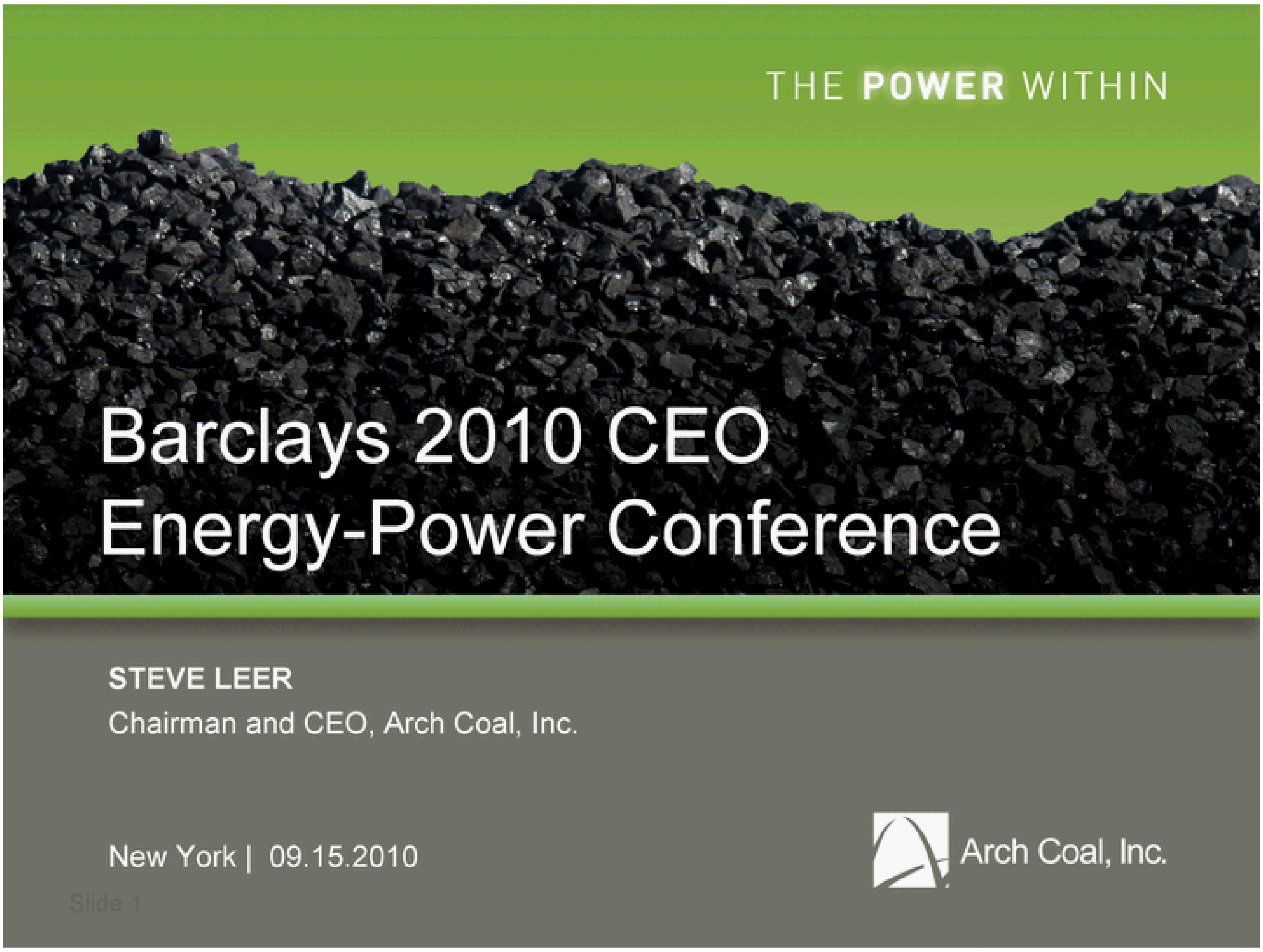
Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: September 15, 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 Barclays Capital CEO Energy/Power Conference.

Exhibit 99.1


THE POWER WITHIN
Barclays 2010 CEO
Energy-Power Conference
STEVE LEER
Chairman and CEO, Arch Coal, Inc.
New York | 09.15.2010
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.


THE POWER WITHIN
Arch Coal, Inc.
State of Coal Markets

Coal was disproportionately impacted by downturn in 2009; now outperforming other fuels in recovery

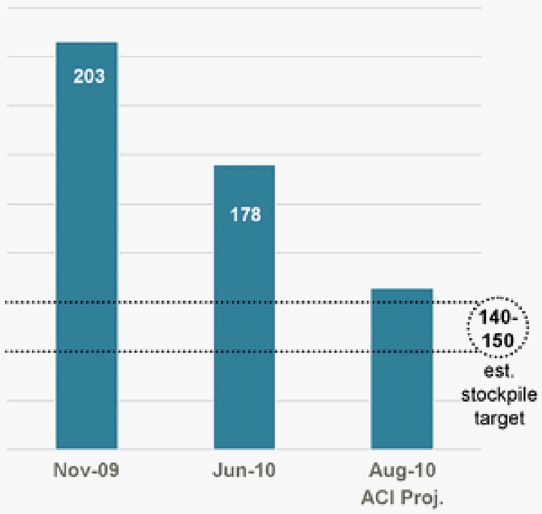
Incremental U.S. Coal Consumption and Supply
(in millions of tons)

		2009		2010E
Economy	↓	55 – 65	↑	20 – 25
Weather	↓	25 – 35	↑	30 – 40
Natural Gas	↓	20 – 30	↑	15 – 20
Hydro	↓	3 – 5	↑	1 – 2
Nuclear	↓	1 – 3	↑	0 – 2
Total Demand	↓	120	↑	65 – 90
Supply	↓	97	↓	0 – 10
Surplus/Deficit	↑	23	↓	**~82**

Source: EIA

U.S. coal stockpiles are being liquidated at a rapid pace

Estimated Coal Stockpile Levels at U.S. Power Generators
(in millions of tons)

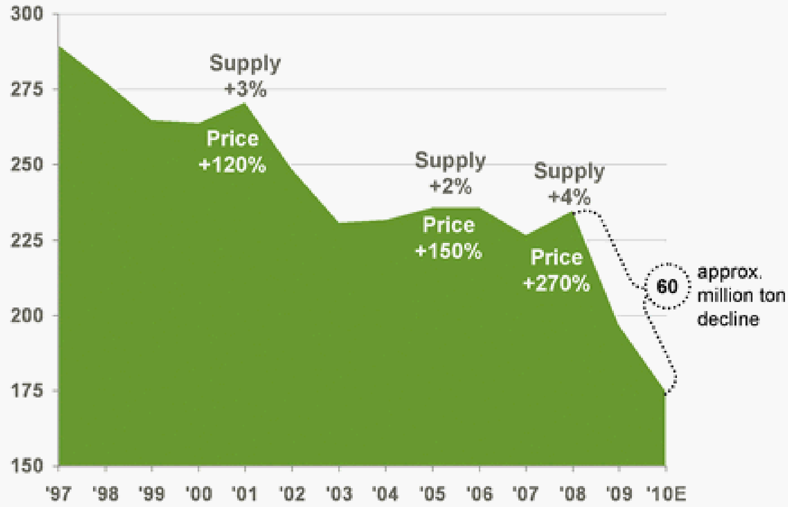


Source: EIA and ACI

- U.S. generator **coal stockpiles have declined considerably** since the peak in November 2009
- **Stockpiles at PRB** customers reached **target levels** in July; may be below target by end of summer
  - PRB prices for 2011 delivery have increased more than 20% since beginning of year
- Further stockpile reductions support favorable environment for forward curve index prices

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

Production in Central Appalachia
(in millions of tons)



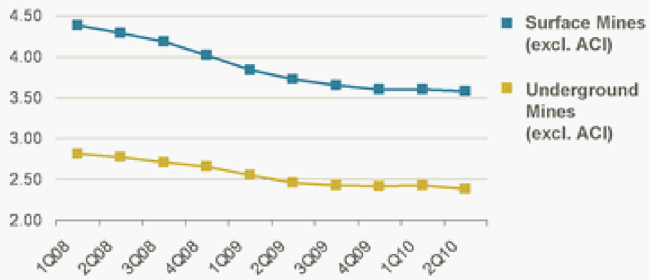
Source: ACI, Coal Daily Price Indices (CAPP 12,000 Btu / 1% Sulfur / CSX) and Ventyx

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

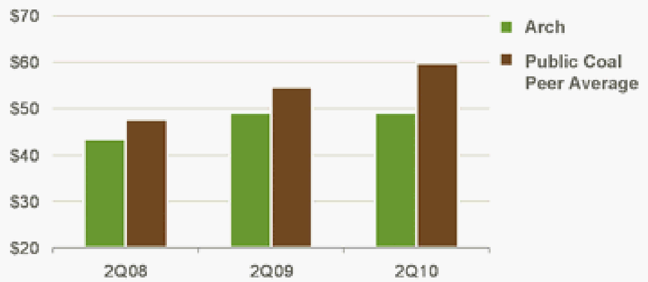
Central Appalachia productivity continues to decline, fueling higher production costs in the region

- **Surface productivity** has declined nearly 20% since beginning of 2008
  - Surface production declines will accelerate given regulatory challenges in the region
- **Underground productivity** has declined 15% over this time period
  - Underground production is geared towards met markets … and higher prices should slow the decline
- Not surprisingly, **cash costs have increased** in the region
  - Costs up 13% for ACI, and up more than 25% for peer average

Central Appalachia Productivity
(tons per hour)



Central Appalachia Production Costs
(cash costs per ton)



Source: ACI, MSHA, Peer Company Filings

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 U.S.
- Consistent with history, **PRB will be called upon to fill supply gap** created by Appalachia
- Replacing 70 million tons of lost CAPP supply and crossover tons would require nearly 95 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

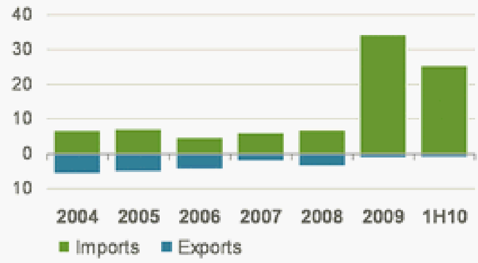
Northern Appalachian

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

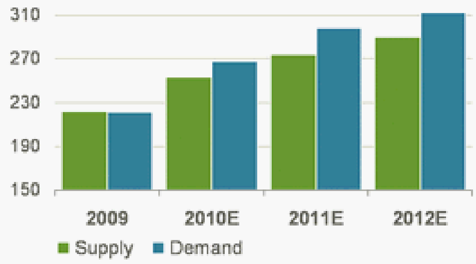
Met coal demand continues to be strong

- **Strong met coal fundamentals** supported by global economic recovery and Asian steel demand
  - China has become a net importer of steam and met coal
  - Asia expected to drive met coal demand growth going forward
- **Production** and **transportation infrastructure issues** as well as a **lack of accessible, quality met coal** deposits will continue to constrict supply

Chinese Met Coal Trade Position
(in millions of tonnes)



Global Met Coal Supply and Demand
(in millions of tonnes)



Sources: ACI and Wall Street research

THE **POWER** WITHIN

Arch Coal, Inc.

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

Seaborne Coal Trade
(~1.1 billion tons, 2010E)

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

South America: infrastructure constraints; political uncertainty; 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: 50% of coal exports expected to move to Asia in 2010; domestic needs and infrastructure constraints limit export growth

Indonesia: aggressive planned expansion of exports; growing domestic demand; coal quality declining rapidly

Australia: continued growth in exports to Asia with port/rail constraints not keeping pace with demand; decreasing exports to Europe


THE POWER WITHIN
Arch Coal, Inc.
Arch Coal Overview
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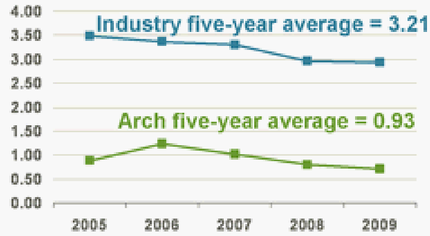
Arch continues to be an industry leader in safety and environmental compliance

- Record **safety** lost-time and total incident rates in 2009
  - 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 only 11 total SMCRA violations, a 22% improvement over 2008

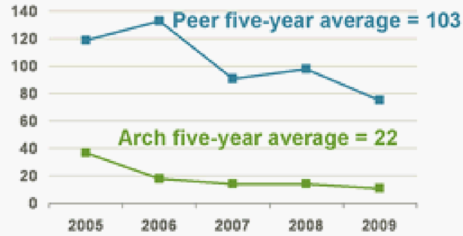
Lost-Time Safety Incident Rate

(per 200,000 employee-hours worked)

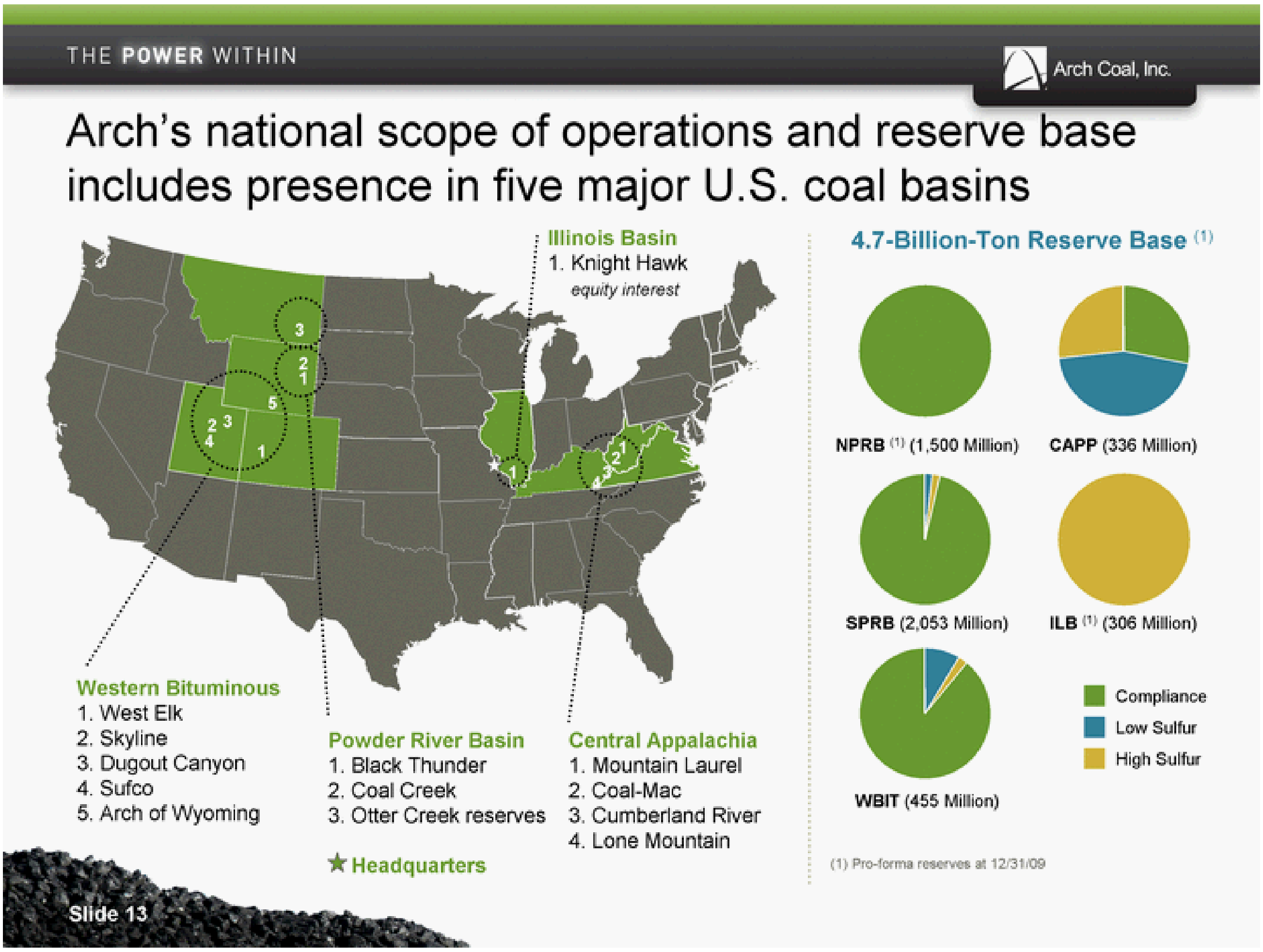


Environmental Compliance

(SMCRA violations based on state reports)



Source: ACI, MSHA, State environmental agencies


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 (1)
NPRB (1) (1,500 Million)
CAPP (336 Million)
SPRB (2,053 Million)
ILB (1) (306 Million)
WBIT (455 Million)
Compliance
Low Sulfur
High Sulfur
Western Bituminous
1. West Elk
2. Skyline
3. Dugout Canyon
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
(1) Pro-forma reserves at 12/31/09
Slide 13

Arch is strongly positioned for the recovering domestic coal market

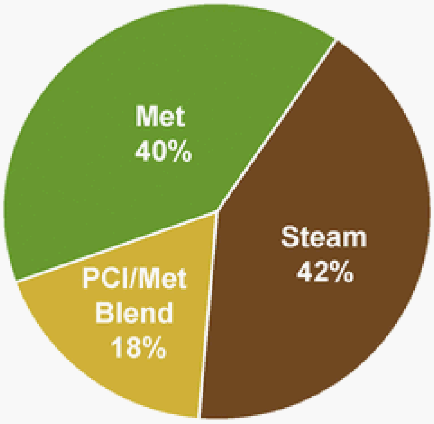
- Arch employs a pragmatic, **market-driven pricing strategy**
- Volume for 2010 largely committed and priced
- We strive to preserve our long-term earnings leverage by retaining the **flexibility to layer** in future volumes at attractive levels
  – Given current pricing levels, we anticipate favorable pricing for our future uncommitted tonnage

Arch Unpriced Tonnage
(as of 6/30/10, in millions of tons)

(1) Represents mid-point of expected uncommitted volumes for 2011 and 2012

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

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

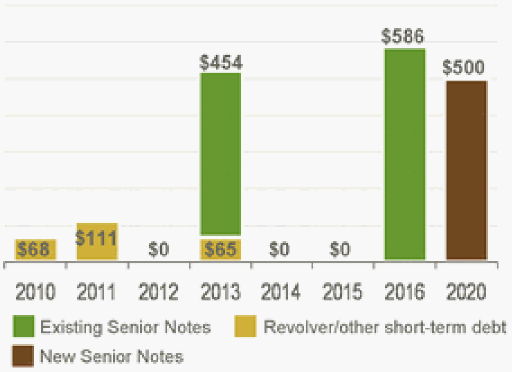


- Arch's low-cost production profile is positioned towards serving **high margin met market** as well as high quality **Eastern power** and growing **seaborne steam** markets
- In the current met market, Arch's **met shipments should increase meaningfully**
- Arch has invested modest capital in 2010 to **add met** production at Cumberland River – increasing total met capabilities to up to **8 million tons per year** on an annualized basis, if market conditions warrant

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

Pro Forma Debt Maturity Profile [1]

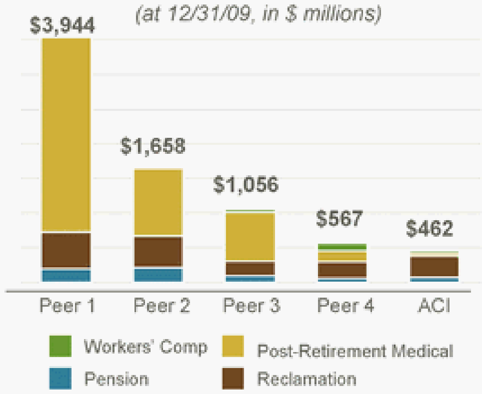
(at 6/30/10, in $ millions)



- Financing initiatives in 2009 enhanced **liquidity** and extended **debt** maturities
- Recent transaction reduced 2013 maturity tower
- Available liquidity is more than $850 million [2]

Legacy Liabilities of Largest U.S. Coal Companies

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



- **Low level** of legacy liabilities versus largest U.S. coal companies
- Two-thirds of Arch's legacy liabilities are comprised of reclamation liabilities

Source: ACI and SEC filings

(1) Values for existing senior notes represent book values net of unamortized discount; value for new senior notes represents face value

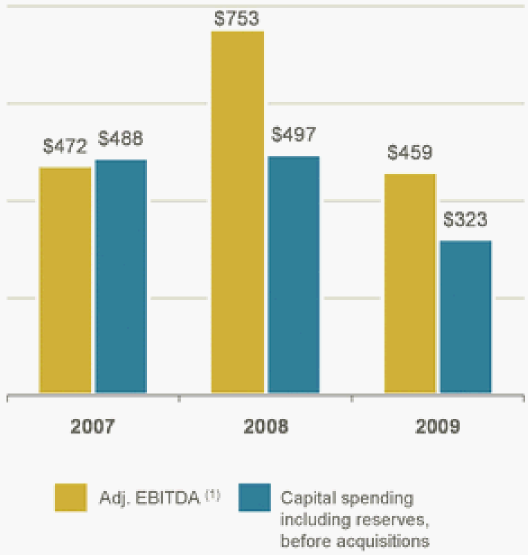
(2) Represents unused available borrowing capacity under ACI's revolving credit facility, accounts receivable securitization program and commercial paper placement program

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 and Capital Spending Comparison

(in $ millions)



(1) Adjusted EBITDA is defined and reconciled at end of presentation

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

Adjusted EBITDA is defined as net income attributable to the Company before the effect of net interest expense, income taxes, depreciation, depletion and amortization and the amortization of acquired sales contracts, net, and other non-operating expense. Adjusted EBITDA may also be adjusted for items that may not reflect the trend of future results.

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. In addition, acquisition-related expenses are excluded to make results more comparable between periods. 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.

	Year Ended December 31,		
	2009	2008 (Unaudited)	2007
Net income	$ 42,179	$ 355,211	$ 175,943
Income tax expense (benefit)	(16,775)	41,774	(19,850)
Interest expense, net	98,310	64,285	72,265
Depreciation, depletion and amortization	301,608	293,553	243,695
Amortization of acquired sales contracts, net	19,623	(705)	(1,633)
Costs related to acquisition of Jacobs Ranch	13,726	-	-
Other non-operating expense			2,273
Net income attributable to noncontrolling interest	(10)	(881)	(1,014)
Adjusted EBITDA	$ 458,661	$ 753,237	$ 471,679