

**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 6, 2007 (September 6, 2007)

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 6, 2007, Steven F. Leer, Chairman and Chief Executive Officer of Arch Coal, Inc., will deliver a presentation at the Lehman Brothers CEO Energy/Power 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 exhibits are attached hereto and furnished herewith.

Exhibit No.	Description
99.1	Slides from the presentation at the Lehman Brothers 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 6, 2007

Arch Coal, Inc.

By: /s/ Robert J. Messey

Robert J. Messey

Senior Vice President and Chief Financial Officer

Exhibit Index

Exhibit No.	Description
99.1	Slides from the presentation at the Lehman Brothers CEO Energy/Power Conference.



Lehman Brothers CEO
Energy/Power Conference

Steve Leer
Chairman and CEO

New York
September 6, 2007

Unearthing Value

Arch Coal, Inc. 



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.

Slide 2





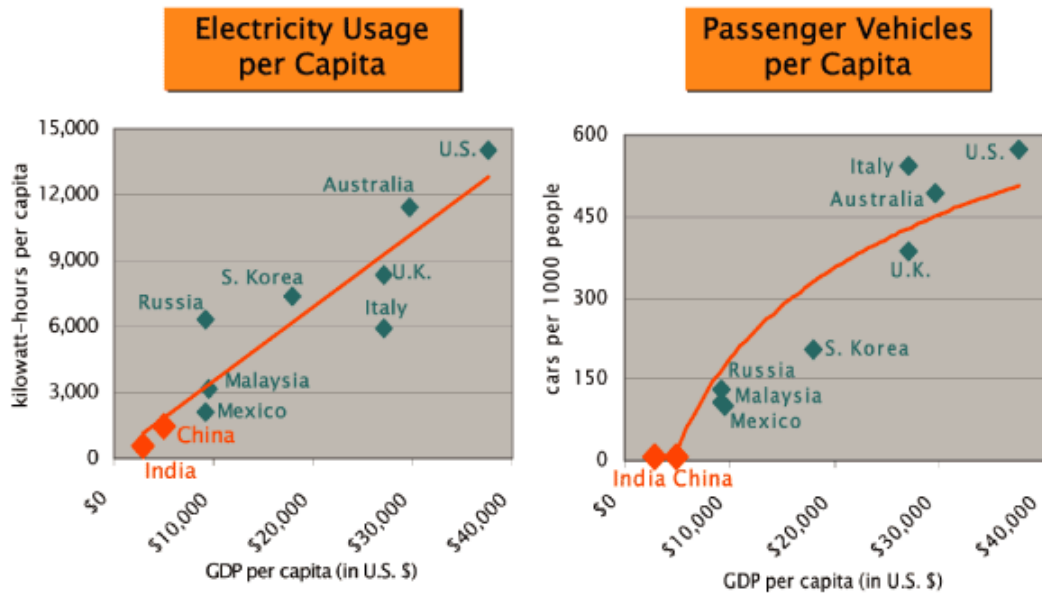
Long-Term
Macro Fundamentals

Unearthing Value

Arch Coal, Inc.



Developing nations will increase energy use, putting pressure on global supply

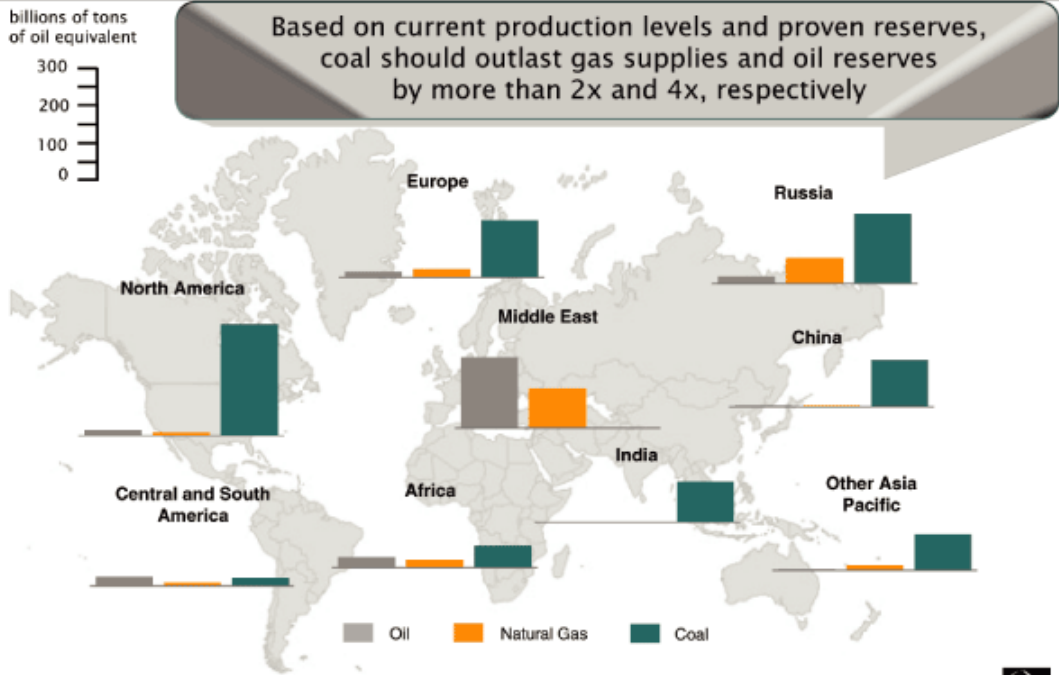


Slide 4

Source: United Nations' Human Development Report 2005, 2005 World Development Indicators (World Bank)



Coal's advantage: abundant, secure and widely dispersed



Slide 5

Source: Bank of America, BP Statistical Review and Blackwell Energy Research



Growth in electric generation markets will drive coal consumption in the U.S.

**Expand
the Pie**

1% increase in GDP
= 0.7% increase in
electric generation



**Fill in
Troughs**

Increased utilization at
existing plants can
expand demand by at
least 100 million tons¹



**Grow
the Base**

New coal plant construction
will add meaningfully to
coal's 310 GW installed base

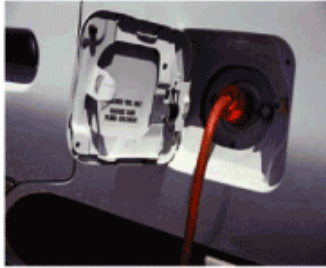


Slide 6 ^{1/} - Assumes an 80% demonstrated peak utilization vs. 73% average utilization.

Source: EIA and ACI



Over the long-term, clean-coal technologies can broaden market demand for coal



- A plug-in hybrid is one entry for coal into the transportation market

- ▶ *Likely to create significant off-peak demand for electricity*

- Coal can be converted into ultra-low-sulfur diesel fuel

- ▶ *At current oil prices, coal-to-liquids facilities are economically feasible*

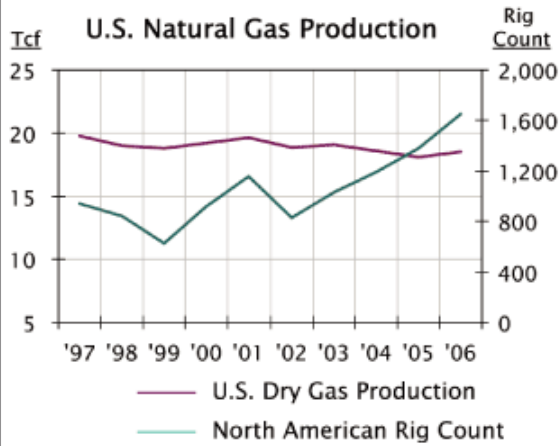
- Gasification can reduce emissions & transform coal into pipeline-quality natural gas

- ▶ *IGCC & CCS should enable coal to prosper in a carbon constrained world*

Public policy initiatives for domestic energy security are spurring debate on energy legislation and financial incentives for clean-coal technology development

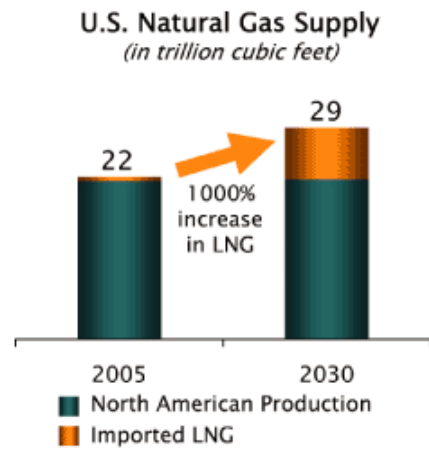


Electric generation will increasingly rely on foreign sources of natural gas



- U.S. dry natural gas production has declined since peaking in 2001 despite an ever increasing number of rigs in production

Slide 8

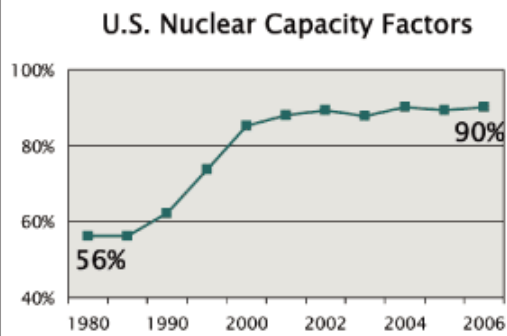


- Increased dependence on foreign natural gas will be required for natural gas just to maintain its share of electric generation

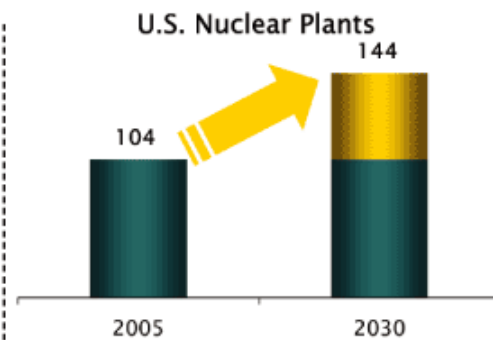
Source: EIA, ACI and Baker Hughes



Significant nuclear expansion is necessary just to maintain share



- Nuclear utilization has increased substantially over the past 25 years
 - ▶ *Since 2000, nuclear utilization has been at or close to 90%*
- It is unlikely that utilization can increase further given refueling and maintenance requirements



- At least 40 new units are needed just to maintain current share
 - ▶ *No new plant additions are forecasted in the next 10 years*
- Current nuclear generating infrastructure is aging
 - ▶ *By 2030, the average age of nuclear infrastructure will be 50 years old*

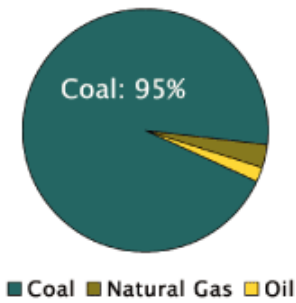
Slide 9

Source: EIA and ACI



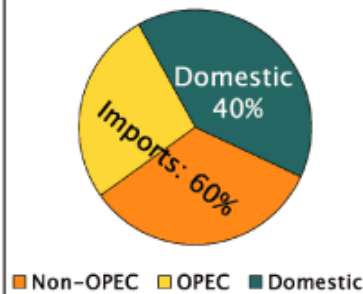
Coal is – and will remain – a vital part of America’s energy future

U.S. Energy Reserves
(in trillion Btu)



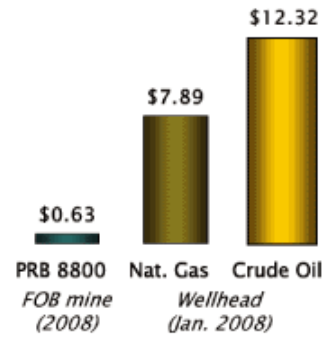
■ Coal ■ Natural Gas ■ Oil

U.S. Petroleum Supply
(million bbls per day)



■ Non-OPEC ■ OPEC ■ Domestic


U.S. Fuel Prices
(\$/mm Btu, at 8/29/07)



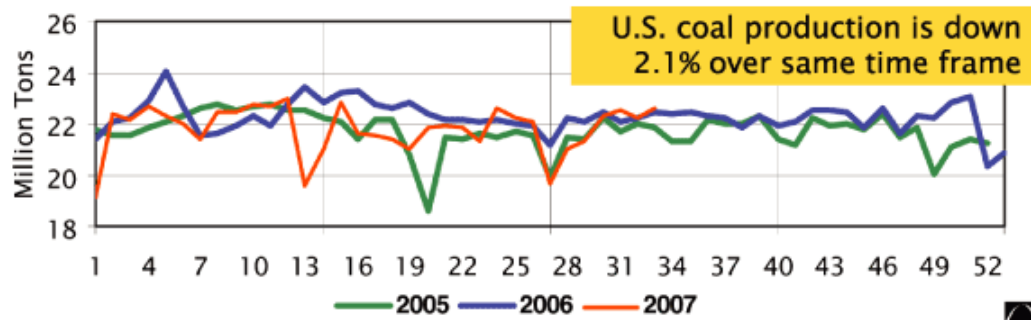
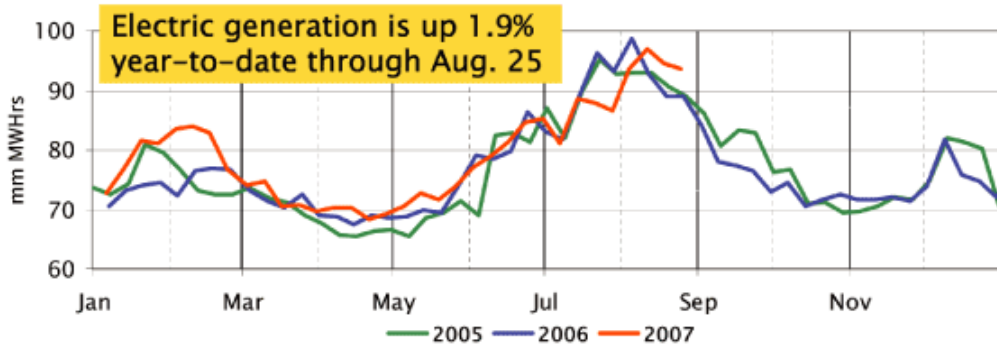


Current Trends

Unearthing Value

Arch Coal, Inc. 

U.S. coal market fundamentals are improving in 2007

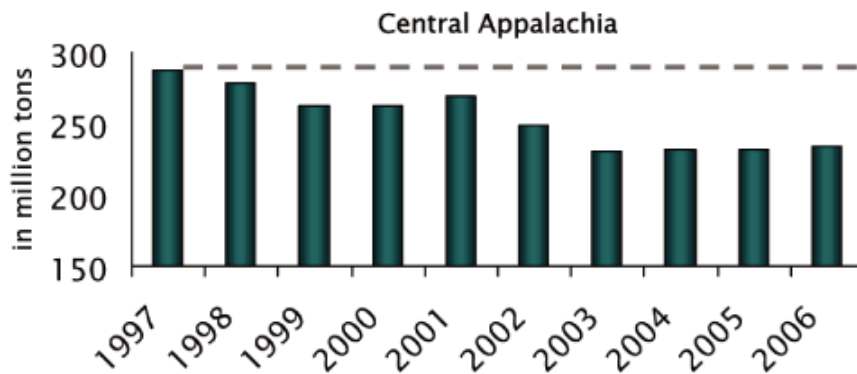


Slide 12

Source: ACI, EEI, EIA and MSHA



Pressures on Appalachian coal production continue to build



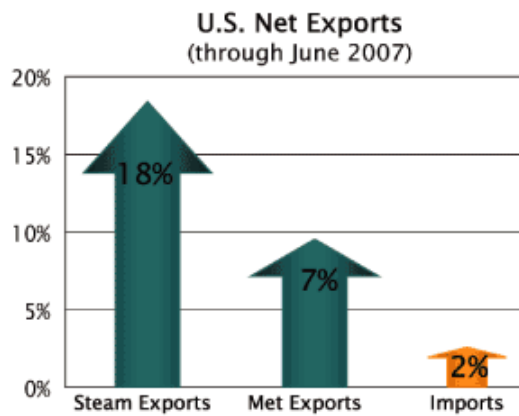
- Despite price spikes in 2001 & 2004, production peaked in 1997
- Cost pressures show no signs of abating
- Loss of synfuel tax credits may idle some high cost mines
- Legal/regulatory hurdles threaten to escalate production decline
- Consolidation and rationalization are widely anticipated

Slide 13

Source: Platts and ACI estimates



Strength in international coal markets likely to spill over into domestic market



- Strong seaborne markets driven by higher consumption in Asia
- U.S. coal increasingly valued for purposes of supply diversification
- U.S. import growth muted as supply is diverted into strong seaborne trade

- U.S. export opportunities likely to grow in 2008 due to tight international supply conditions
- Timing for start-up of Arch's Mountain Laurel longwall in 4Q07 is highly advantageous
 - ▶ *Flexibility to sell substantial portion of tonnage into met market*

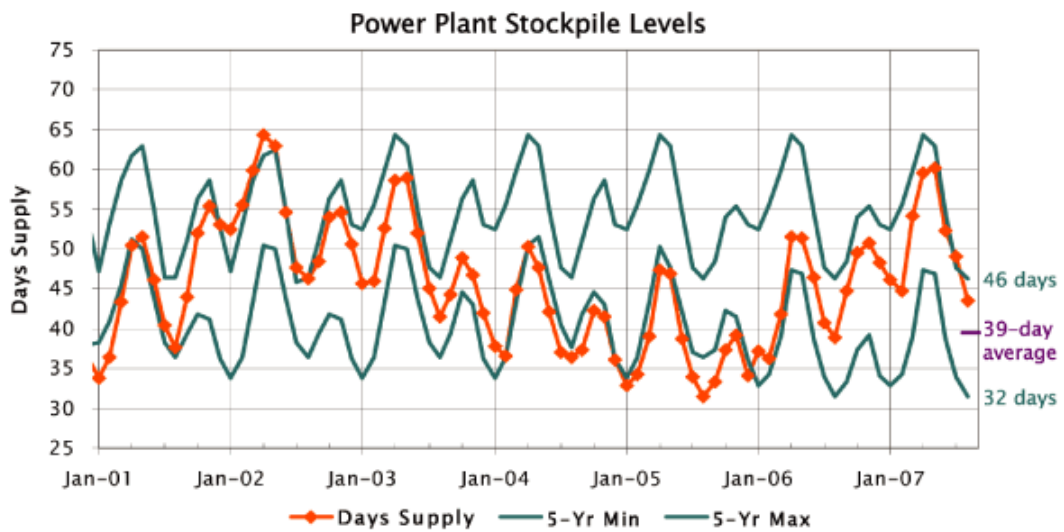


Slide 14

Source: ACI and NMA



While future prospects are bright, near-term challenges persist



- New stockpile norm may be closer to 5-year maximum vs. average
- Arch estimates stockpiles at the end of August to be roughly 44 days

Slide 15


Source: ACI and EIA estimates



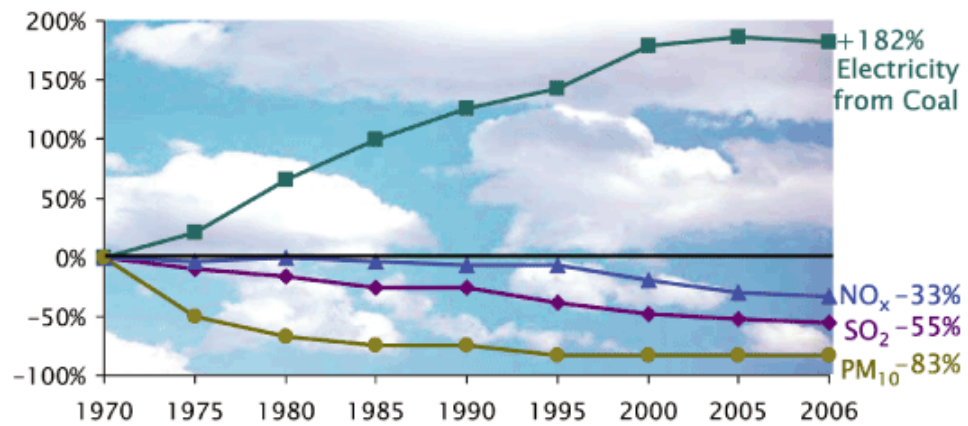


Climate Concerns and
the Future of Coal

Unearthing Value

Arch Coal, Inc. 

Coal is being used in increasingly clean ways



- More progress is expected under existing regulations
- Higher efficiency rates and the eventual deployment of coal gasification technologies create opportunities for reducing carbon intensity as well



Governmental support for clean-coal technologies is growing



"...we'll need to invest more in the clean technology that will allow us to burn more coal, our country's most abundant fossil fuel."

Senator Barack Obama (D-IL)



"The Strategic Energy Fund would provide \$3.5B in incentives and grants to speed the development of more clean coal plants across the country ..."

Senator Hillary Clinton (D-NY)

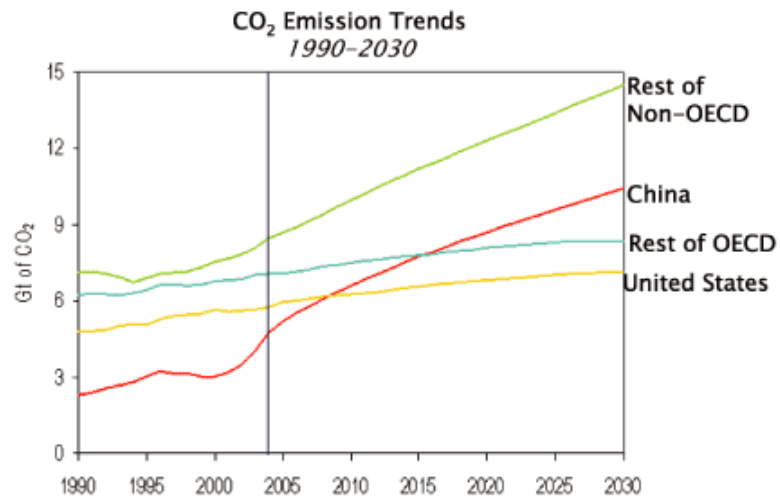


Nancy Pelosi, Speaker of the House (D-CA)

"We have a coal industry in our country that cannot be ignored. We want technology to be the answer ... My view is that we must move in a very strong, forceful and generous way in investing in the research for sequestration..."



Developed world must adopt climate solutions and export these to developing nations



- China is likely to surpass the U.S. in GHG emissions this year
- The growth rate of GHG emissions in developing nations is likely to significantly exceed that of the developed world

Slide 19


Source: IEA World Energy Outlook 2006, *Guardian*





Arch Coal

Unearthing Value

Arch Coal, Inc. 

About Arch Coal, Inc.



- One of the largest coal producers in the U.S.
- Core business is providing U.S. power generators with clean-burning, low-sulfur coal for electric generation
 - ▶ *Supplies roughly 11% of U.S. coal needs*
 - ▶ *Provides source fuel for roughly 6% of U.S. electricity*
- Talented workforce operates large, modern mines
- Industry leader in mine safety, productivity and reclamation

Slide 21

Source: ACI



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



2.9-Billion Ton Reserve Base



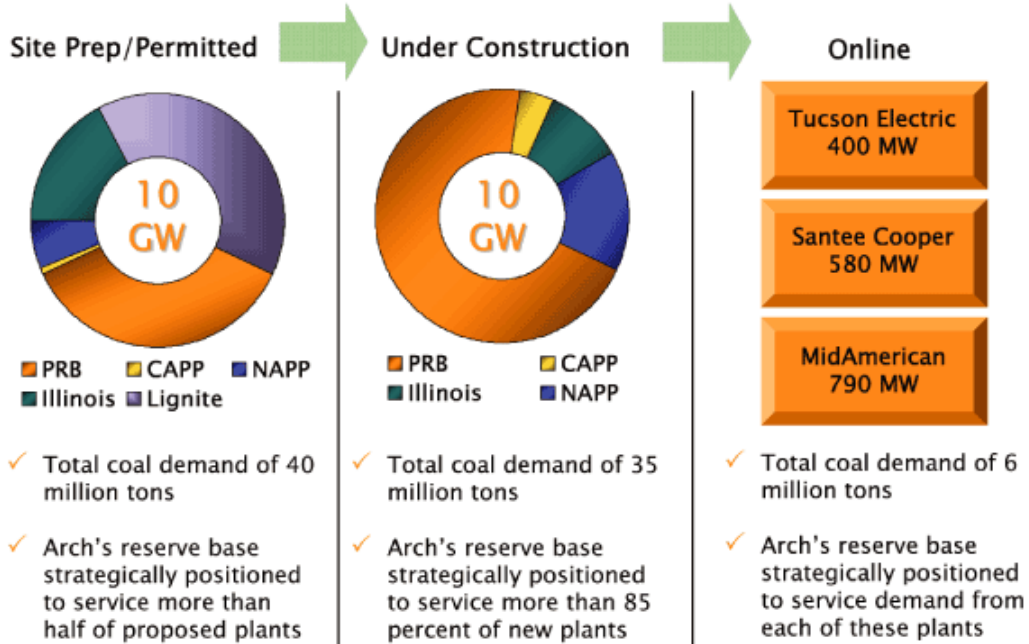
Slide 22

■ Compliance
 ■ Low-sulfur
 ■ High-sulfur

Source: ACI



Arch's extensive and diverse reserve base is advantageous for sourcing new coal plants

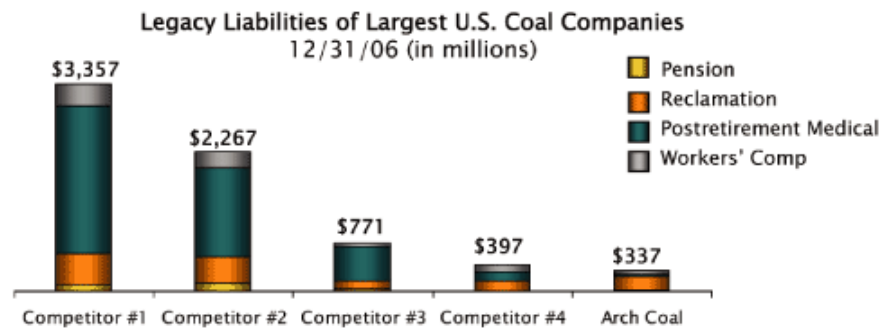
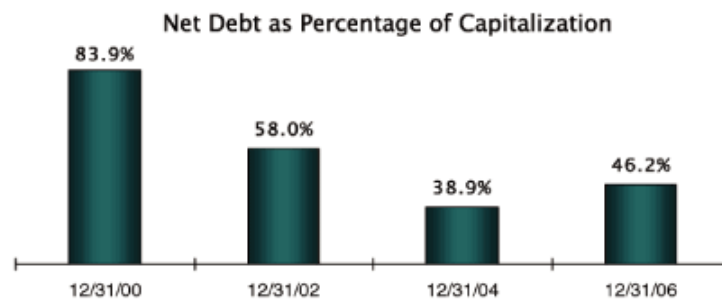


Slide 23

Source: Platts and ACI



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



Slide 24

Source: SEC filings compiled by ACI



Arch's 2006 performance validates its focus on three key pillars for success



- **Operating the world's safest coal mines**
 - ▶ *Recognized by MSHA's Sentinels of Safety award for operating the nation's safest underground coal mine in 2005*
 - ▶ *Second-best year on record for lost-time incidents*
 - ▶ *Outperformed the industry safety average by three times*
- **Achieving industry-leading productivity rates**
 - ▶ *Operated three of top eight most productive longwall mines*
 - ▶ *Sufco was the most productive underground mine*
 - ▶ *Surface mines produced 170% more tons than industry average*
- **Acting as responsible citizens and environmental stewards**
 - ▶ *National Good Neighbor Award*
 - ▶ *Greenlands Award – best reclamation in West Virginia*

Slide 25

Source: ACI and Public Sources

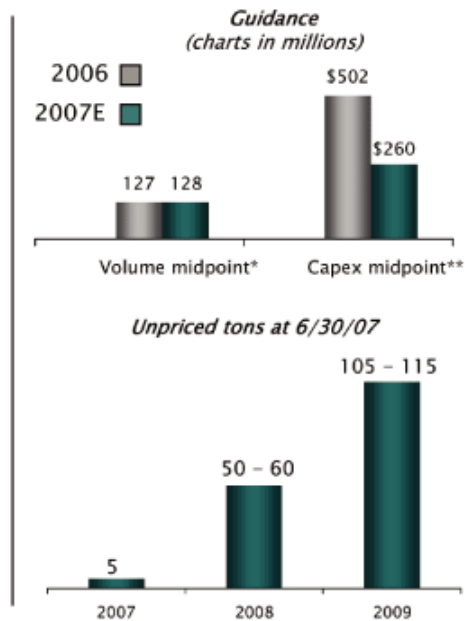


Arch has reduced production levels and is containing costs in a weak market cycle

- Reduce production targets
 - ▶ *Preserve value of reserves*
- Lower capital spending
 - ▶ *Align spending with market demand and reduced production levels*
- Focus on cost control
- Patient approach to contracting
 - ▶ *Unpriced position allows Arch to participate in upside potential as market rebounds*
 - ▶ *Creates long-term value for shareholders*

**Volume excludes pass-through tons
**Capex excludes reserve additions*

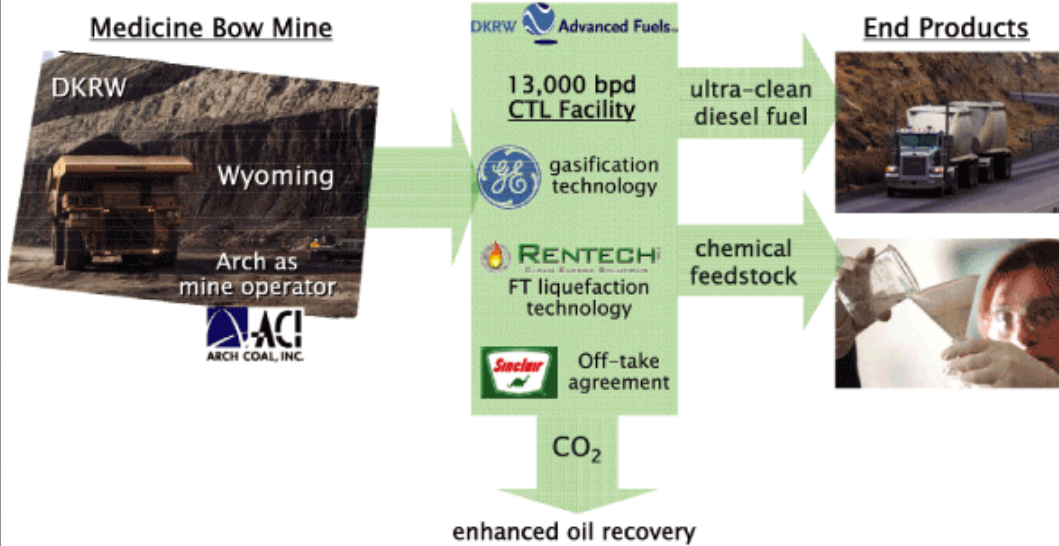
Slide 26



Source: ACI



Arch is changing perceptions of coal through investment in coal-conversion technologies



Arch owns an equity stake in DKRW Advanced Fuels



Arch's future strategic growth possibilities are compelling



- Invest in core businesses to enhance profit growth and return on capital as well as evaluate opportunities to further upgrade and expand reserve base
- Consider acquisitions, divestitures or other investments that strategically fit and create shareholder value
- Expand market for coal (*and perception of coal's value*) through Btu conversion technologies that provide significant upside

