



Smart ideas. Smart energy.

Arch Coal, Inc. 2007 Annual Report





Do you know where your electricity comes from? Coal, mainly. It powers 50% of America's homes, businesses and cities.

As one of the nation's largest, safest and most productive coal companies, Arch Coal is hard at work supplying 6% of America's electricity.

Arch Coal (NYSE:ACI) is one of the largest producers of coal in the United States. We are a recognized leader in mine safety and land reclamation, and maintain headquarters in St. Louis. Our core business is providing U.S. power generators with cleaner-burning, low-sulfur coal for electric generation. We also export coal for use in steel-making and electric power generation. Through 11 mining complexes in six states, we supply roughly 12% of America's coal needs. Our national network of mines services 148 U.S. power plants in 33 states and customers in more than a dozen countries worldwide. For more information, visit us at www.archcoal.com.

On the cover: Salt Lake City.
Coal powers 84% of Utah.

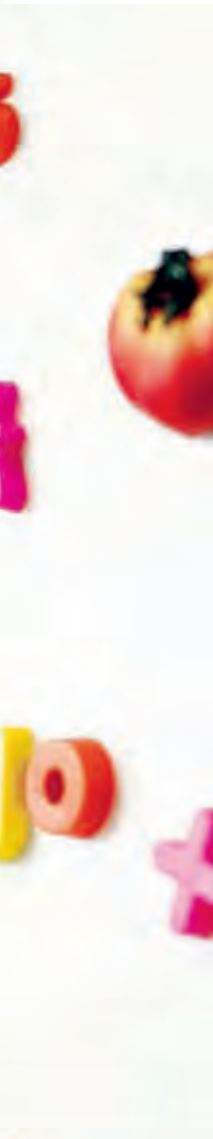


An abundant and vital national resource, coal is the smart choice to supply America's ever-growing energy needs.

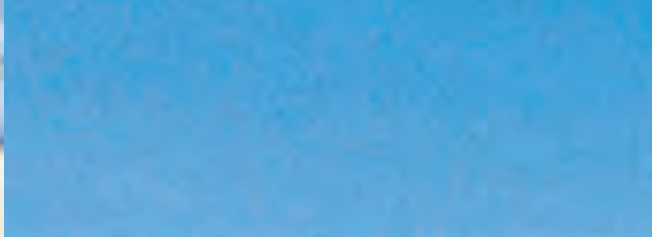
Coal used in powering America's electric grid is expected to climb 40% to 1.4 billion tons by 2030. Arch is smartly positioned to meet this demand through its national scope of operations and an extensive, 2.9-billion-ton reserve base.



Coal provides affordable electricity, keeping household energy costs predictable and preserving America's quality of life.



At one-third the cost of crude oil or natural gas, coal is the most economical fuel choice for power generators. At Arch, we manage our costs by maintaining a superior asset portfolio and by utilizing highly efficient and safe mining methods. In 2007, our surface operations were 2.7 times more productive than the industry surface average, and three of our longwall operations ranked among the top eight most productive underground mines in the nation.



With access to low-cost energy inputs, American industries are more competitive globally thanks to coal.



On average, European companies spend twice as much per kilowatt-hour for electricity as American businesses. This cost saving provides a competitive advantage for our domestic industries and economy. Arch keeps a competitive edge by employing large-scale and sophisticated mining equipment operated by a skilled and loyal workforce. We also benefit from maintaining one of the strongest balance sheets in the industry.



A large – and growing – installed base of U.S. coal-generating capacity ensures that our power grid runs reliably every day.

Reliable, dependable, safe. That's what we want from our power and for our industry. Arch employees make smart choices daily to ensure their workplace and actions are safe. In 2007, our award-winning mines ranked first among industry peers for safety performance, and delivered our second-best safety record in the company's 10-year public history. Yet we won't be satisfied until we achieve our ultimate goal of zero incidents. This unwavering pursuit of excellence in safety represents the cornerstone of Arch's corporate culture.



Coal's potential is evolving, from the backbone of our nation's power supply to a resource that fuels our automotive fleet.

By 2030, Americans could convert more than 150 million tons of coal annually into liquid fuels, helping to reduce our dependence on foreign energy sources. With current technology, Arch's extensive reserve base could be transformed into more than 5 billion barrels of oil equivalent. That's why we own an equity interest in a coal-conversion company that plans to build a coal-to-gasoline facility in southern Wyoming, and capture the carbon dioxide emissions to enhance recovery in domestic oil fields.



Americans are embracing smarter technologies to make our energy use more efficient and environmentally friendly.



At Arch, we're funding programs to benefit America's communities. Our mines are leaders in land reclamation, having earned one of the nation's top environmental honors again in 2007. We're supporting greener places to live and work by planting millions of trees and providing wildlife habitat enhancement programs on reclaimed mining lands. And, we're establishing the legacy of a responsible energy company by honoring educational excellence through student scholarships and teacher awards and grants that work toward building a smarter tomorrow.



Since 1970, U.S. power plant emissions have declined by 50% even as coal-based electricity use has tripled.



We're ensuring a cleaner world for the next generation. As a top producer of low-sulfur coal, Arch has aided power plants in reducing regulated emissions. We've also invested in a technology company that seeks to cut power plant mercury emissions. And, we're supportive of technologies that will make coal use more climate-friendly. Governments, technology providers, power producers and energy companies are making real progress in the quest to develop near-zero-emission coal plants by the end of the next decade. Now, that's smart energy.




America's most abundant natural resource – a 230-year coal supply – improves our nation's energy security,

Coal makes up 94% of our nation's fossil-fuel resource base vs. 3% each for oil and natural gas. Domestic coal reserves will outlast world oil and gas reserves by more than a century at current rates. In a world short of energy, shouldn't we rely on what we have at home? With a vast and diverse reserve base, Arch has decades of safe, low-cost and domestic energy ready to power America.



and allows us to enjoy life's daily activities. We have the power to choose the essential benefits that coal can provide.



The National Mining Association estimates that U.S. coal production is responsible for creating 500,000 jobs and contributing \$72 billion in output for the U.S. economy. The development of related industries – such as clean-coal technologies – should lead to the creation of additional domestic jobs and economic wealth. Imagine America without coal? We can't.

Why should America choose coal? Because it's smart energy.

Financial Highlights

Year Ended December 31

(In millions, except per share data)

	2007	2006	2005
Tons sold	135.0	135.0	140.2
Revenues	\$ 2,413.6	\$ 2,500.4	\$ 2,508.8
Income from operations	\$ 229.6	\$ 336.7	\$ 77.9
Net income available to common shareholders	\$ 174.7	\$ 260.6	\$ 22.5
Fully diluted earnings per share (EPS)	\$ 1.21	\$ 1.80	\$ 0.17
Adjusted EBITDA*	\$ 471.7	\$ 545.0	\$ 290.2
Dividends declared per common share	\$ 0.27	\$ 0.22	\$ 0.16

*Adjusted EBITDA is defined and reconciled at the end of this report.



Dear Fellow Shareholders:

“We resoundingly believe that coal is the right fuel to power America’s future.”

Steven F. Leer
Chairman and Chief Executive Officer

As our report states, coal is indeed the smart energy choice to power America. In 2007, each American used almost 20 pounds of coal daily to run appliances, laptops, schools, businesses and cities. Yet most of us don’t realize that the resource primarily responsible for powering our lives is, in fact, coal. At Arch, we are proud to say that America’s abundant national coal reserves supply one-half of our nation’s electricity, and provide us with affordable, reliable and secure energy. We resoundingly believe that coal is the right fuel to power America’s future.

While last year’s headlines focused on our nation’s drive to go green, far fewer articles chronicled the endemic problem of skyrocketing energy costs. In fact, the impact of escalating electricity and gasoline expenditures on the average American household was dramatic. As I write this letter, with oil topping \$100 per barrel and gasoline above \$3 per gallon, the need for affordable, domestic and stable sources of energy has never been more apparent.



“We are committed first and foremost to operating the nation’s safest coal mines.”

Arch is attracting a new generation of skilled employees that is highly attuned to our prevention-oriented safety culture.

America’s Greatest Energy Resource

Our world is short of energy. With developing nations, particularly China and India, expanding and electrifying their economies at an unprecedented pace, energy demand has soared. In the past five years alone, global coal demand has grown by 30 percent. These structural changes in energy markets are creating fundamental shifts in global coal supply flows, and are contributing to a robust export market for U.S. coal. In 2008, we expect the United States to set a record – the highest export level in this decade – and anticipate the strong coal export trend to continue into the next decade.

Dynamic global coal markets are having a spillover effect onto the domestic front. 2007 has proven to be a transitional year for U.S. coal, as increased coal consumption and reduced production levels allowed domestic markets to essentially rebalance. These factors – along with insatiable international demand – have provided the catalyst for rising domestic coal prices. Powder River Basin coal index pricing has more than doubled in the past year, and other coal regions are experiencing

record prices at present. Over the long term, we expect pricing to continue to be upwardly biased, driven by supply constraints in several key U.S. coal regions, as well as continued growth in electric-generation demand from coal’s large, and growing, domestic and international plant base.

Despite some announced coal plant delays and cancellations last year, the United States is currently experiencing the largest build-out of new coal-fueled generating capacity since 1980. Roughly 25 gigawatts of new coal plants are under construction or in advanced permitting stages in this country – translating into more than 85 million tons of new annual coal demand over the next five years.

While this build-out is encouraging, it represents only a fraction of what is needed to fulfill our country’s energy requirements. A 2007 study by the North American Reliability Council concludes that peak electric-generation demand growth in the United States will greatly outstrip supply growth over the next 10 years. This study also notes that safety reserve margins for some electric capacity in this country may fall

to critically low levels as early as 2009. The United States must build significant new baseload generating capacity to meet rising demand, to replace antiquated plants and to prevent rolling black-outs. At Arch, we consider our nation's abundant domestic coal reserves to be the smart choice to fuel that capacity.

America's coal deposits account for 94 percent of our nation's known fossil-fuel reserves, compared with 3 percent each for crude oil and natural gas. We strongly believe that our nation should embrace what we have in greatest abundance – and commit ourselves to using coal in increasingly clean and climate-friendly ways.

Smart Execution

Arch achieved a solid financial performance in 2007 despite the downturn in U.S. coal markets during the first half of the year. Through adherence to our market-driven strategy – coupled with smart execution at our operations – we delivered our second-best year on record for earnings.

One of the year's most significant accomplishments was the completion of the Mountain

Laurel complex in Central Appalachia. Given booming world metallurgical coal markets and strong export thermal coal markets, the timing of the Mountain Laurel longwall start-up was extremely advantageous. This complex has become the centerpiece of our operations in the region, and should enhance our earnings profile in coming years given its superior geology, competitive cost structure and strategic access to export coal markets. We expect to double our seaborne export volume in 2008 to service strong global coal markets while capitalizing on new opportunities to export coal from our Western Bituminous operations and even the Powder River Basin.

In 2007, Arch also made a strategic investment in coal reserves in the Illinois Basin to further expand the company's competitive position in the region. We expect the Illinois Basin to play a more significant role in U.S. energy markets over the next decade, and this acquisition enhances our low-cost platform for future growth in a region where our company has had a long and successful history.



“We take our commitment to being responsible stewards of the land seriously.”

Arch passionately pursues excellence in environmental stewardship. Native grasses and wildlife thrive on our reclaimed lands.



“Core values of safety, environmental stewardship and shareholder value define Arch’s culture as a responsible energy company.”

Arch employs large-scale haul trucks at its surface operations in Wyoming. The truck fleet at our Black Thunder mine hauls enough coal to continuously power nearly 15 million American homes.

Additionally, we celebrated Arch’s 10-year anniversary as a public entity in 2007. During the first 10 years of operation, Arch strategically expanded its footprint westward, built a competitive position in major U.S. low-sulfur coal regions and established itself as one of the industry leaders in safety performance. Arch has since grown to become one of the largest domestic producers of coal. Looking ahead, we are confident that our company is well positioned for future growth, and expect to continue to deliver superior shareholder value over the course of the next 10 years of operation and beyond.

Future Success

Our company’s future success hinges upon three pillars of performance – safety, environmental stewardship and shareholder value. These core values define Arch’s culture as a responsible energy company.

We are committed first and foremost to operating the nation’s safest coal mines. In 2007, one-half of our individual mines, preparation plants and terminals worked an entire year

without a single reportable incident, helping Arch maintain its industry-leading safety record. Our Cumberland River Band Mill mine earned the U.S. Department of Labor’s Sentinels of Safety award last year as the nation’s safest underground mine in 2006, marking the second year in a row that an Arch subsidiary was so honored.

We also take our commitment to being responsible stewards of the land seriously. In 2007, Arch achieved its best performance on record for environmental stewardship, and ranked first among major coal industry peers, as measured by environmental regulatory compliance standards. Both our Coal-Mac and Mountain Laurel operations earned U.S. Department of the Interior awards for outstanding reclamation and good neighborly practices. Mountain Laurel was the third Arch subsidiary in four years to earn a national Good Neighbor Award.

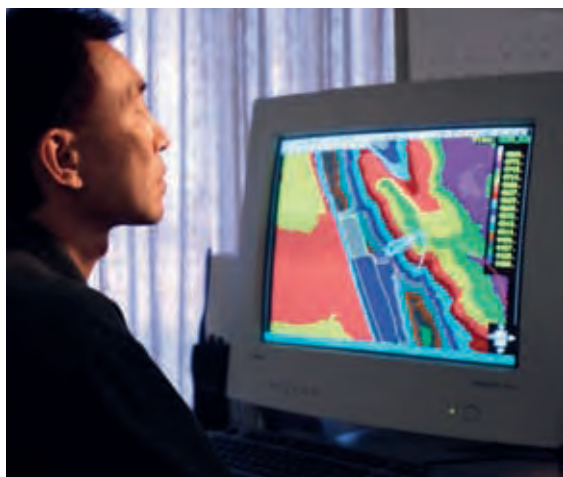
While we are proud of our accomplishments in safety and environmental performance – and would like to thank our employees for their hard work and dedication – we also know that we, as a company and an industry, need to work smarter

and safer. That's why we are dedicated to implementing the most innovative safety practices in the coal industry. It's also why we are implementing a new environmental policy in 2008 to improve upon our sustainability practices, and to further protect natural habitats and wildlife on our reclaimed mining lands. We simply will not be satisfied until all of our operations achieve a "perfect zero" safety and environmental record every single year.

We believe operating the nation's safest and most environmentally responsible mines enhances shareholder value over the long term. Since the company's inception on July 1, 1997, a \$1,000 investment in our company's stock would have returned approximately \$4,400 to shareholders as of this letter date, on a cumulative total return basis. A comparable \$1,000 investment in the S&P 500 would have returned a cumulative total return to shareholders of roughly \$1,800 over the same time frame.

Smart Ideas

Coal *must* go green – and it is. Since 1970, the United States has tripled its coal-based electricity



use and real gross domestic product, while regulated power plant emissions have been cut in half. We are confident that more progress can be made in addressing such emission concerns – including mercury and eventually carbon.

Arch already aids power producers in meeting America's environmental objectives by supplying them with cleaner-burning, low-sulfur coal. We're also working with the technology company ADA to continue to lower mercury emissions from coal, thus helping power producers to generate even fewer emissions.

We are convinced that technology is the answer in addressing concerns over the link between fossil-fuel use and climate change. If we are serious about stabilizing greenhouse gas concentrations in the atmosphere, we must advance technologies that the developing world can use to address their rapidly growing greenhouse gas emissions. At Arch, we are committed to working with policy makers, technology providers and customers to play a positive and constructive role in addressing these concerns. That's why the U.S. coal industry – armed with

“We are convinced that technology is the answer in addressing concerns over the link between fossil-fuel use and climate change.”

Investments in research and development of clean-coal and coal-conversion technologies are helping to pave the way for greater security in America's energy future.

support from coal-based generators, railroads and others – is working hard to educate the public about coal's benefits, and to empower them to make informed decisions on America's greatest domestic energy resource. I encourage you to visit www.americaspower.org to learn more about this campaign.

We also think it's smart public policy to advance alternative sources of domestic fuel. Coal-conversion technologies, such as coal-to-liquids and coal-to-gas, could meaningfully enhance America's energy security and provide real economic benefits to our country by bringing to market additional domestic supplies of transportation fuels and synthetic natural gas. We can even greatly reduce the carbon footprints of these clean fuels derived from coal by using the carbon dioxide emissions to enhance recovery in domestic oil fields. That's why Arch has invested in a coal-conversion company that plans to construct a coal-to-gasoline facility in southern Wyoming. We are confident that Americans can – and will – harness the power of domestic coal reserves safely and smartly for generations to come.

Smart Choices

With improving market conditions, Arch expects to deliver a record earnings performance in 2008, and drive even stronger future operational

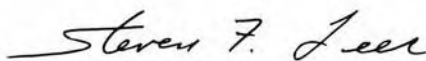
performance. We are prepared to capitalize on booming global and strong domestic coal markets while maintaining our passion for safety, production flexibility and cost control at our operations.

Arch is strategically positioned to meet growing domestic and international coal demand through an extensive, predominantly low-sulfur and widely dispersed 2.9-billion-ton domestic reserve base. With a presence in four of the five major domestic coal supply basins, our company's large-scale and diverse operations and reserve base span the United States. We have one of the industry's strongest balance sheets, with the lowest level of post-retirement and workers' compensation liabilities among major coal industry peers. And, our company has a talented and experienced workforce that is committed to operating the safest, most efficient and most environmentally responsible mines in the nation.

Looking ahead, we will continue to pursue the best strategic options available to enhance value for our shareholders, as we have done in the past. Our goal is to build a truly world-class energy company of which employees, customers and shareholders alike can be increasingly proud. We thank you for your continued interest in and support of our company.

Choose smart, choose coal, choose Arch.

Sincerely,



Steven F. Leer

Chairman and Chief Executive Officer

February 25, 2008

Arch Coal, Inc. Shareholder Information

Common Stock

Our common stock is listed and traded on the New York Stock Exchange under the ticker symbol ACI. On February 25, 2008, our common stock closed at \$54.90, and we had approximately 8,200 holders of record of our common stock on that date.

Dividends

Arch paid dividends on our common stock totaling \$0.27 per share in 2007. There is no assurance as to the amount or payment of dividends in future periods because they are dependent on our future earnings, capital requirements and financial condition.

Code of Business Conduct

We operate under a code of business conduct that applies to all of our salaried employees, including our chief executive officer, chief financial officer and controller. The code is published under "Corporate Governance" at <http://investor.archcoal.com>.

Corporate Governance Guidelines

Our board of directors has adopted corporate governance guidelines that address various matters pertaining to director selection and duties. The guidelines are published under "Corporate Governance" at <http://investor.archcoal.com>.

Independent Public Accounting Firm

Ernst & Young LLP
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St. Louis, Missouri 63105

Financial Information

Please direct any inquiries or requests for documents to:

Investor Relations
Arch Coal, Inc.
One CityPlace Drive, Suite 300
St. Louis, Missouri 63141
(314) 994-2897
www.archcoal.com

Transfer Agent

Questions regarding shareholder records, stock transfers, stock certificates, dividends or other stock inquiries (other than our dividend reinvestment and direct stock purchase plan) should be directed to:

American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Level
New York, New York 10038
(800) 360-4519
www.amstock.com

Requests for information about our dividend reinvestment and direct stock purchase plan should be directed to:

American Stock Transfer & Trust Company
P.O. Box 922, Wall Street Station
New York, New York 10269-0560
(877) 390-3073
www.amstock.com

Corporate Social Responsibility Report



We published our inaugural Corporate Social Responsibility Report in 2007. This report details the company's commitment to acting as a responsible energy company during its first 10 years as a public corporation. The full report may be downloaded at www.archcoal.com.

Clean Coal. America's Power.

Learn more about coal's contribution to America's power at www.americaspower.org.





Powering America's past, present and future energy needs. Choose smart, choose coal, choose Arch.

