

REDACTED

**UNITED STATES BANKRUPTCY COURT  
EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION**

**In re**

**PATRIOT COAL CORPORATION, *et al.*,**

**Debtors.**

**Chapter 11  
Case No. 12-51502-659  
(Jointly Administered)**

**Objection Deadline:  
March 28, 2013 at 4:00 p.m.  
(prevailing Central Time)**

**Hearing Date:  
April 10, 2013 at 10:00 a.m.  
(prevailing Central Time)**

**Hearing Location:  
Courtroom 7 North**

**DECLARATION OF SETH SCHWARTZ IN SUPPORT OF  
THE DEBTORS' MOTION TO REJECT COLLECTIVE BARGAINING  
AGREEMENTS AND TO MODIFY RETIREE BENEFITS  
PURSUANT TO 11 U.S.C. §§ 1113, 1114**

Seth Schwartz declares pursuant to 28 U.S.C. § 1746:

1. I am President of Energy Ventures Analysis, Inc. ("EVA"), which was retained in June 2012 by Patriot Coal Corporation ("Patriot") as an expert consultant in connection with these chapter 11 proceedings.

2. I have been a partner at EVA since its founding in 1981. EVA is a consulting firm that specializes in the analysis of energy markets, including coal, oil, natural gas, electric power and emissions. I manage EVA's consulting practice in coal markets, including the following areas:

- Analysis and projection of coal supply, demand and market prices;

- Management of coal procurement activities, including negotiation of coal supply and transportation contracts;
- Evaluation of coal mine operations and production costs, including labor costs and mine productivity;
- Purchase and sale of coal properties; and
- Publication of coal market data reports and forecast reports.

3. Our clients in these areas include:

- Coal consumers, such as electric power generators, industrial companies and steel producers;
- Coal producers, reserve owners and transportation companies;
- Coal brokers and trading companies;
- Investors in the coal and power industries, such as banks, private equity firms and hedge funds;
- Regulatory agencies such as public utility commissions; and
- Trade associations.

4. My work has included expert testimony in federal and state courts, arbitration panels and regulatory hearings. I have testified regarding coal markets and prices, coal contract provisions, prudence of coal procurement practices and damages from breach of contract. My resume and a list of prior testimony are attached hereto as Appendix 1, and a list of the documents that I have considered in forming my opinions in this matter is attached as Appendix 2. EVA receives a monthly retainer for our work for Patriot in its restructuring effort, against which EVA charges my hourly rate of \$400 for my services in this matter.

### **SUMMARY OF OPINIONS**

5. The following is a summary of my principal opinions in this matter.
- The coal market has been in a sharp contraction since 2008. Appalachian coal production fell by 14.4% from 2008 to 2011 and fell another 12.6% in 2012. The cause of the decline in the thermal coal market is principally reduced generation from coal-fired power plants, which have retired due to new federal regulations and are burning less coal due to competition from lower-priced natural gas. The metallurgical coal market also fell sharply in 2012 because of weak demand, coupled with increased competition in the international market from growing supplies from Australia and other countries. As a result of the fall in demand for Appalachian coal, production has been cut and the highest-cost mines are being closed. To the extent demand for thermal coal remains, it fluctuates with changes in the weather, the economy and the market price for natural gas (itself a volatile commodity). Customers are now reluctant to enter into long-term coal contracts because they cannot predict their coal consumption with any certainty. The entire coal market has thus become more volatile and less predictable in recent years.
  - Due to the terms of their labor agreements, companies with union operations have substantially higher costs per ton to produce coal than non-union producers. These costs are in the form of higher wages and benefits as well as lower productivity due to the work rules mandated by the agreements. Patriot's labor costs per hour worked are between 32% and 197% higher at its mines where labor is represented by the United Mine Workers of America ("UMWA") than at its comparable operations where hourly labor is non-union. Additionally, the proportion of Patriot's labor that is represented by the UMWA is very high relative to that of other coal companies. For instance, Patriot is the only coal producer that operates with UMWA-represented employees in two of its four market segments (Illinois Basin and Central Appalachia thermal coal); none of its competitors in those regions use union labor. Patriot's operating costs are accordingly higher than its competitors', both due to greater labor compensation costs and lower labor productivity, with the highest costs of any public producer in the Illinois Basin (where costs can be readily compared). As a result, Patriot is at a severe competitive disadvantage.
  - The Section 1113 and 1114 proposals made by Patriot are necessary to the company's survival. Coal production in the regions where Patriot competes has rapidly changed to non-union operations, and there are few remaining producers subject to labor contracts. Patriot will need to have a cost structure that is competitive in the industry to survive, especially in a new era with shrinking coal demand and increased volatility in the coal

markets. The thermal coal market has been fundamentally altered due to the development of low-cost natural gas. The metallurgical coal market is under pressure from new supply in other countries. Coal sales in both markets have shifted from long-term contracts to a majority of sales being made on a short-term basis. Coal producers must adapt to survive in these new markets. They will not be able to rely on the steady shipment rates of long-term contracts and produce steady monthly volumes to meet steady customer demand. Instead, producers have to be flexible in their operating schedule and be staffed accordingly. Patriot cannot continue to produce coal with inflexible work rules and labor costs above all of their non-union competitors and survive in the industry. Under its existing labor contracts, Patriot has higher wage and benefit rates and lower labor productivity than its competitors. Patriot's labor contracts must be transformed in order for its mines to be economic in the coal market. Further, Patriot is burdened with the greatest amount of long-term liabilities (labor and environmental) per ton of current coal production of any company in the coal industry. Patriot's proposals to reform its labor liabilities are necessary to bring them down to the level of its competitors.

### **CHALLENGES FACING THE COAL INDUSTRY**

#### **A. Background on the Coal Industry**

6. Coal is a combustible sedimentary and metamorphic rock which is formed through the progressive carbonization of plant matter under pressure and temperature. As a result of differences in types, grades, qualities, sources and uses, coal is a highly differentiated product.

7. The largest uses of coal are for combustion in boilers (for steam or power generation) and the conversion to coke for use in steel making. Coal used in power generation is generally known as "steam coal" or "thermal coal," while coal used in steel making is called metallurgical or "met coal." There are other uses for coal as a feedstock, including chemical and synthetic fuel manufacturing.

8. Steam (or thermal) coal includes many coals with different origins and types, grades and quality characteristics. The wide variation in coal quality affects the design of steam

boilers and their ability to use different coals. It is difficult and expensive for boilers designed for one type of coal to be switched to another type of coal. Further, there are emissions limitations on the combustion of coal which limit the maximum sulfur content that certain customers can use, depending on their emissions control equipment. Thus, thermal coal is not generally fungible.

9. Coal type, grade and quality differences are even more significant for metallurgical coal, including coal used to make coke (“coking” coal) and pulverized coal used for injection in a blast furnace (“PCI” coal). Only a small fraction of coals are suitable for use in coke ovens. At a minimum, coking coals require the characteristic of “caking,” which is swelling upon heating in a low-oxygen atmosphere and forming a cohesive mass upon cooling, which is known as coke. Steel companies prefer a strong coke to support the burden of a blast furnace. Only high-rank bituminous coals possess the properties needed to make coke. Steel companies are very selective in the sources and blends of coal to make a strong coke for use in blast furnaces. They also use a limited amount of coal for pulverized coal injection.

10. Coal is found in geological coal basins, established by the depositional environment of the coal. The most important coal basins in the United States are Appalachia (frequently divided by location into Northern, Central and Southern Appalachia), the Illinois Basin, and the Powder River Basin (“PRB”). There are also various bituminous coal basins in the western United States, sometimes classified as the Rockies, and lignite basins in North Dakota and the Gulf Coast with substantial production and economic value.

11. While the types, grades and qualities of coal vary widely among different coal basins, the coal is more homogenous within the same coal basin. Nonetheless, there often are

significant differences among coals from different sources in the same basin, particularly in the case of metallurgical coal.

12. The following is a general description of the particular types, grades and qualities of coal that Patriot mines from different sources and sells to its customers:

- Northern Appalachia (“NAPP”) high-sulfur thermal coal from the Federal #2 mine, where the hourly employees are represented by the UMWA. Patriot sold 4.0 million tons of NAPP coal in 2012.
- Central Appalachia (“CAPP”) low-sulfur thermal coal. Patriot has a number of complexes that produce thermal coal in southern West Virginia, including Big Mountain, Corridor G, Kanawha Eagle, Logan County, Midland Trail, and Paint Creek. Most of the hourly labor at the Corridor G, Logan County and Big Mountain complexes is represented by the UMWA, while the hourly labor at the other complexes is non-union. The Big Mountain complex was closed during 2012. Patriot sold 8.2 million tons of low-sulfur thermal coal in 2012.
- CAPP high-volatile metallurgical coal. Coal produced from the Panther, Rocklick, Wells, Kanawha Eagle and Paint Creek (Winifrede) complexes is sold in the “high-volatile” met coal market. Much of the hourly labor at the Rocklick and Wells complexes is represented by the UMWA, while the other complexes are non-union. Patriot sold 6.3 million tons of metallurgical coal in 2012, which includes sales from its Rhino Eastern joint venture.
- Illinois Basin (“ILLB”) high-sulfur thermal coal, from three complexes with varying quality: the Bluegrass complex (which was closed at the end of 2012), the Dodge Hill mine and the Highland mine. The Highland mine’s hourly employees are represented by the UMWA, while the hourly employees at Bluegrass and Dodge Hill are non-union. Patriot sold 6.4 million tons of ILLB coal in 2012.

## 2012 Patriot Coal Production and Sales

1000 tons

Region	Mine Complex	Market	Production			Sales
			UMWA	Non-Union	Total	
<b><i>Northern Appalachia</i></b>						
	Federal #2	Thermal	4,045		4,045	4,036
<b><i>Central Appalachia</i></b>						
	Big Mountain	Thermal	54	42	96	106
	Corridor G	Thermal	2,798		2,798	2,837
	Kanawha Eagle	Met/Thermal		789	789	697
	Logan County	Thermal	2,176		2,176	2,198
	Midland Trail	Thermal		1,601	1,601	1,589
	Paint Creek	Met/Thermal		1,642	1,642	1,794
	Panther	Met		2,266	2,266	2,194
	Rocklick	Met	791		791	1,053
	Wells	Met	420	1,126	1,546	1,538
	Purchased coal					472
			<b>6,239</b>	<b>7,466</b>	<b>13,705</b>	<b>14,478</b>
<b><i>Illinois Basin</i></b>						
	Bluegrass	Thermal		1,511	1,511	1,539
	Dodge Hill	Thermal		902	902	879
	Highland	Thermal	3,951		3,951	3,967
			<b>3,951</b>	<b>2,413</b>	<b>6,364</b>	<b>6,385</b>
<b>Total</b>			<b>14,235</b>	<b>9,879</b>	<b>24,114</b>	<b>24,899</b>

Note: Coal sales do not match production due to purchased coal and changes in mine inventory  
Sources: Patriot 2012 SEC Form 10-K; MSHA data; EVA analysis

### **B. Reduced Demand for Coal and Declining Coal Prices**

13. The principal market for U.S. coal is the domestic market for electricity generation. In 2011, the domestic electricity-generation sector accounted for 84% of total U.S. coal demand. The electricity-generation market is the largest market for Patriot's coal, with

thermal coal accounting for 75% of Patriot’s total sales volume and 59% of its coal revenue in 2012.<sup>1</sup>

### US Coal Demand

	2011		2012 est.	
	mm Tons	Share	mm Tons	Share
<b><i>Domestic Consumption</i></b>				
Electric Power	932.5	84%	823.3	81%
Coke Plants	21.4	2%	21.0	2%
Other Industrial	46.2	4%	43.0	4%
Commerical	<u>2.8</u>	<u>0%</u>	<u>2.9</u>	<u>0%</u>
	<b>1,002.9</b>	<b>90%</b>	<b>890.2</b>	<b>87%</b>
<b><i>Exports</i></b>				
Thermal	37.7	3%	66.3	7%
Metallurgical	<u>69.5</u>	<u>6%</u>	<u>62.1</u>	<u>6%</u>
	<b>107.3</b>	<b>10%</b>	<b>128.4</b>	<b>13%</b>
<b>Total Demand</b>	<b>1,110.2</b>		<b>1,018.6</b>	

Sources:

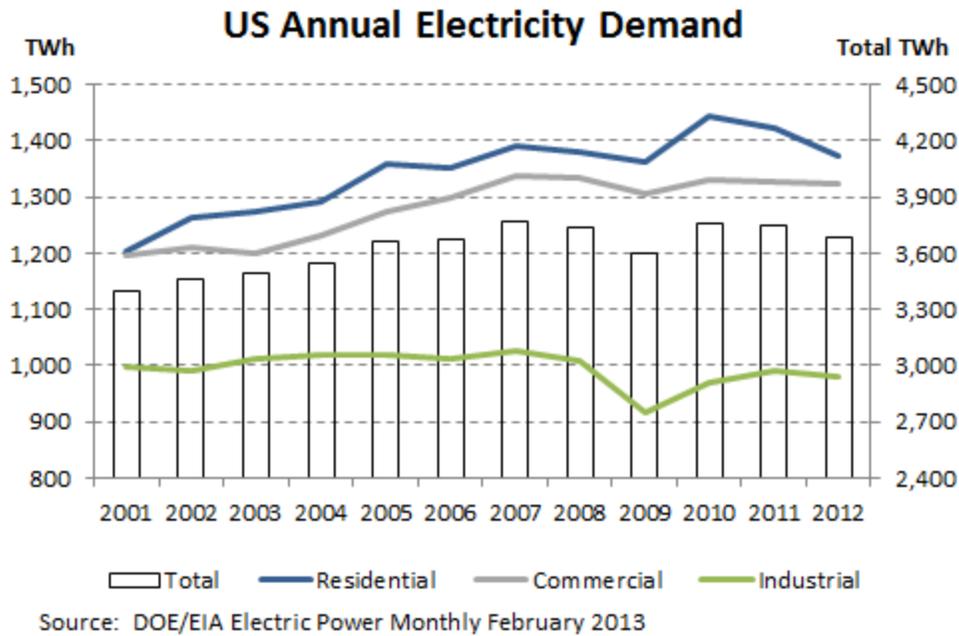
- DOE/EIA Annual Coal Report 2011
- DOE/EIA Quarterly Coal Report Dec. 2011
- EVA estimates for preliminary 2012 data

14. The market for coal in the domestic electricity-generation sector has come under severe downward pressure since 2008, due to a combination of low growth in demand for electricity and increased competition from other sources of electric generation, especially from a surplus of low-priced natural gas and from subsidized renewable sources. As a result, coal-fired electricity generation has fallen sharply from its peak in 2007. In 2011, coal-fired generation fell to its lowest level since 1995, and, based upon preliminary data, coal-fired generation in 2012 fell to its lowest level since 1987.<sup>2</sup>

<sup>1</sup> Patriot Coal Corporation, 2012 SEC Form 10-K, p. 8.

<sup>2</sup> DOE/EIA, 2011 Annual Energy Review, Table 8.2a.

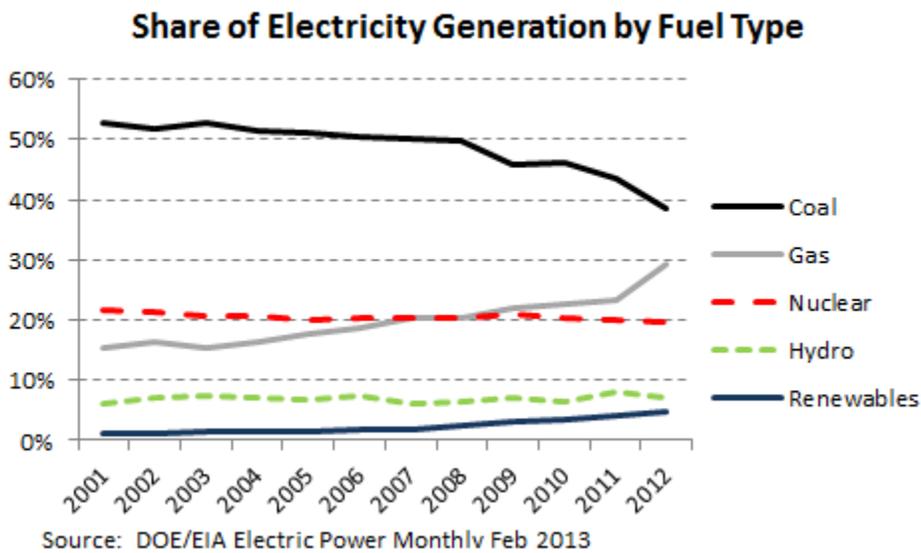
15. Electric power sales reached their peak in 2007 at 3,765 terawatt-hours. Power sales fell 4.5% from 2007 to 2009 due to the recession and have not recovered yet to pre-recession levels. After rebounding in 2010, electricity demand fell in 2011 and 2012.<sup>3</sup> The electric power industry had expected growth to continue as it had for decades prior to 2007.



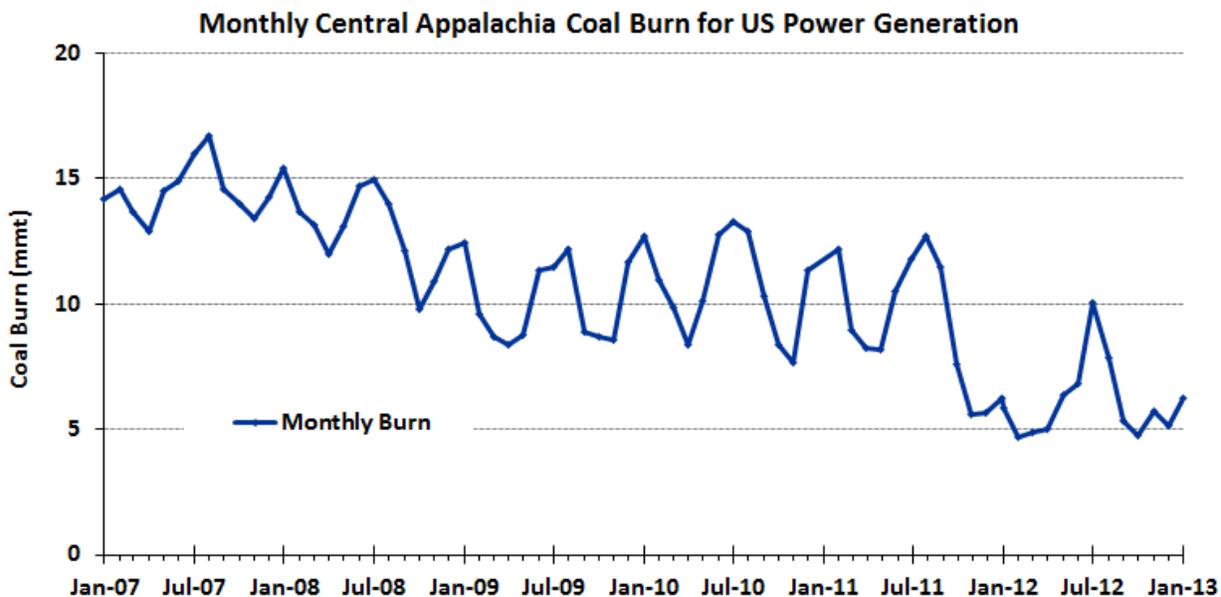
16. As total demand for electricity has been flat or declining, coal has been losing share of electricity generation to natural gas and wind generation since 2007, falling from 50.1% of generation in 2007 to just 38.7% in 2012. The share of generation from renewable sources (principally wind) has more than doubled since 2007, from 1.9% in 2007 to 4.8% in 2012, due to subsidies from the federal production tax credit and mandatory state renewable portfolio standards. However, the largest source of new generation has come from natural gas. Since 2007, gas has been displacing coal for electricity generation, with its share of generation growing from 20.3% in 2007 to 29.2% in 2012. The growth in gas-fueled generation has been driven by

<sup>3</sup> DOE/EIA, Electric Power Monthly, February 2013.

the decreased market price of natural gas, which is the result of increased production of natural gas from shale formations using hydraulic fracturing (“fracking”), and by the increased regulation of emissions produced by coal-fueled electricity generation.

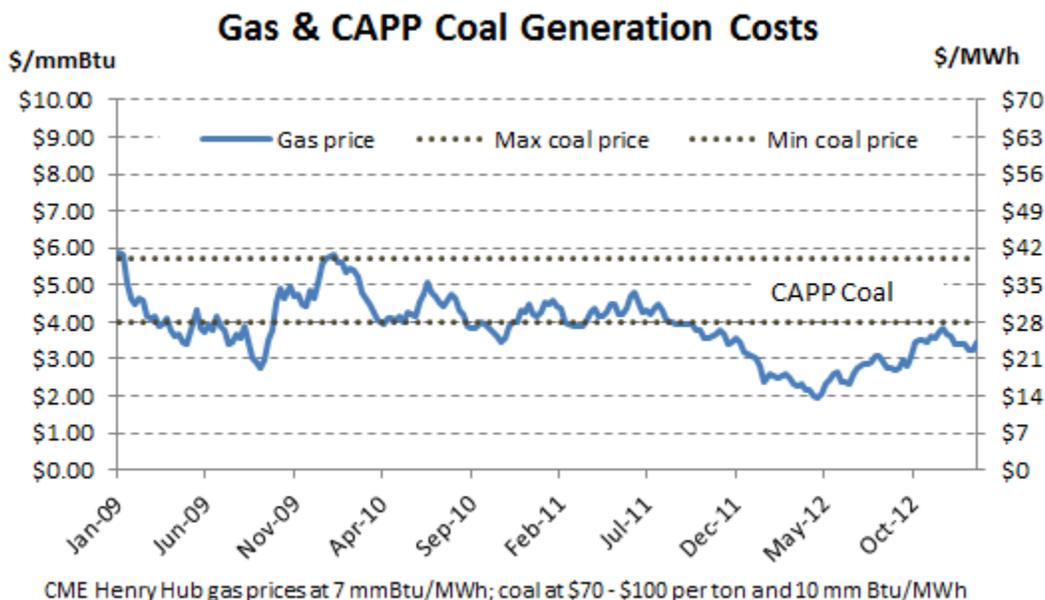


17. Patriot’s largest source of thermal coal production is the Central Appalachia region, which has been hardest hit by the development of lower-cost natural gas because it is the highest-cost coal supply region. The average monthly coal burn of CAPP coal by domestic power companies has fallen 67% from 15 million tons per month as recently as 2007 to just 5 million tons per month through most of 2012.



Source: EVA, COALCAST Monthly Stockpile Report, January 2013

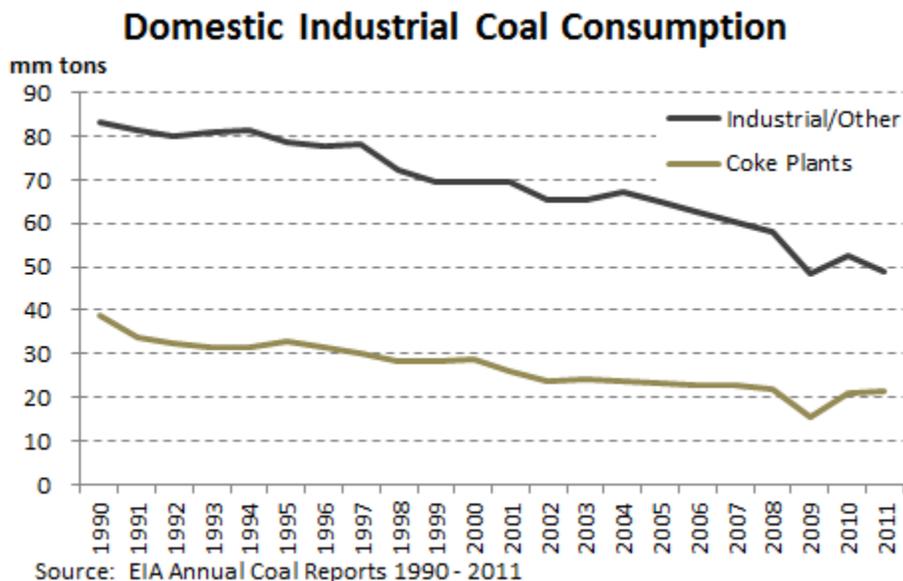
18. Under current market conditions, it is difficult at best for Appalachian coal to compete with natural gas for electricity generation. Since early 2009, natural gas prices have consistently been around \$4.00 per million Btu, and the cost for electricity generation from natural gas has therefore been approximately \$28 per MWh. In contrast, the cost of coal-fired generation using Appalachian coal is at least \$28 per MWh and may be as high as, or higher than, \$40 per MWh. The difference is due in part to the significant efficiency advantage natural gas combined-cycle generation plants have over coal-fired generation plants, with typical heat rates of 7,000,000 Btu/MWh, as compared to 10,000,000 Btu/MWh for a typical coal-fired boiler. Given these efficiency rates and the cost of natural gas, coal with a heat content of 25,000,000 Btu per ton (as is typical of Appalachian coal) must cost \$70 or less per ton on a delivered basis to be competitive. With Central Appalachian (“CAPP”) coal mine prices about \$60 per ton and freight rates between \$10 and \$30 per ton, however, CAPP coal-fired generation simply cannot be competitive with power plants utilizing natural gas at current prices.



19. Since September 2011, natural gas prices have been persistently below \$4.00 per million Btu. The current futures market for natural gas traded on the New York Mercantile Exchange shows that investors do not expect natural gas prices to exceed \$4.10 per million Btu until the end of 2014 or to reach \$5.00 per million Btu until 2019. Thus, reduced demand for coal, especially higher-cost Appalachian coal, is expected to persist for an extended period.

20. Domestic coal demand in the industrial and commercial sectors has been slowly declining for several decades. Demand in industrial and commercial boilers has been replaced by natural gas, which has lower operating costs in small boilers. Demand at domestic coke ovens has declined as blast furnace steel production has been replaced by electric arc furnaces, which do not require coke, and domestic steel makers have begun to use cheap natural gas as a carbon source, thereby displacing coal usage. There is no prospect for a recovery in these sectors, as emissions are coming under pressure from new regulations promulgated by the U.S. Environmental Protection Agency (“EPA”), and the effect of lower gas prices since 2008 is still

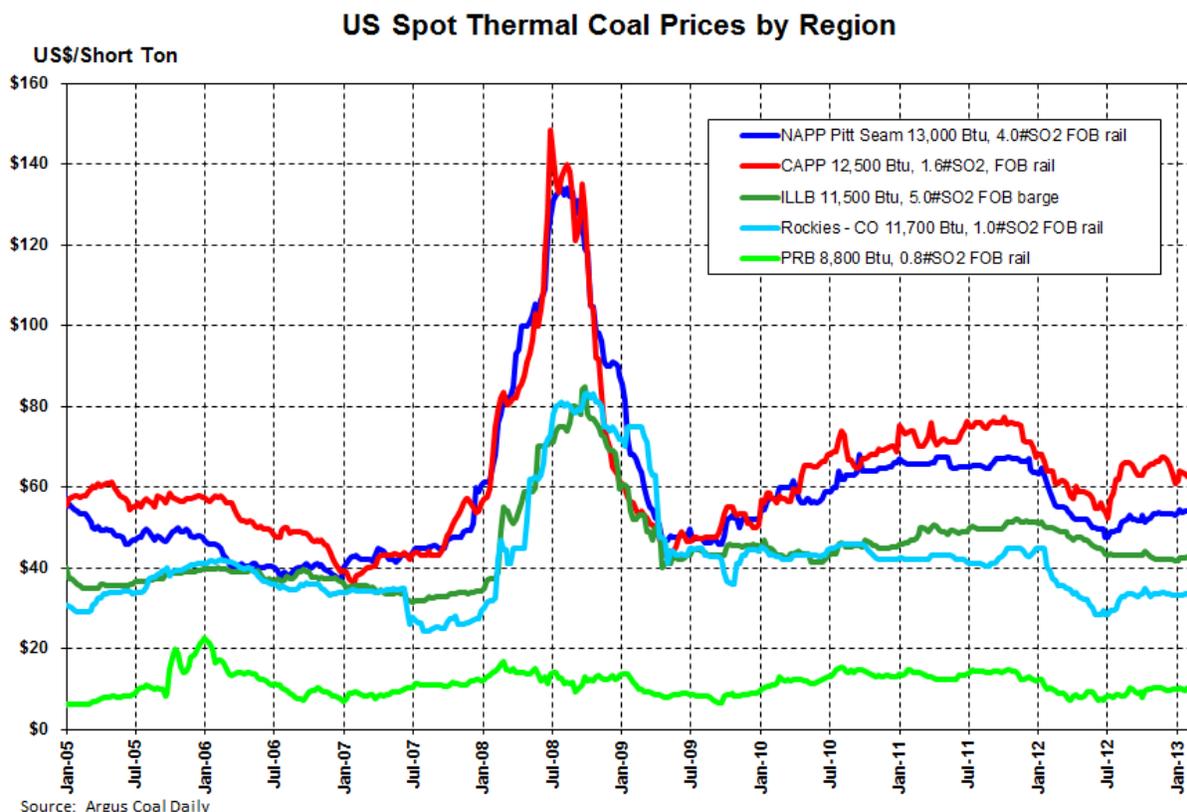
influencing decisions to replace coal boilers with natural gas in the industrial and commercial sectors.



21. Exports are the other major market for U.S. coal, accounting for 10% of the U.S. market in 2011 and increasing to 13% in 2012. Exports have fluctuated with the relative prices of U.S. coal, and world coal markets and currency exchange rates have been a major factor. The decline in U.S. coal prices and the weaker U.S. dollar have spurred increased coal exports. In 2011, metallurgical coal exports reached their highest point in over two decades. World metallurgical coal prices turned down sharply during 2012, however—a sign of the volatility and inconsistency of international demand and pricing.

22. Thermal coal market prices have fallen in response to the pressures of decreased coal demand. Spot coal prices peaked in mid-2008, with strong demand in both domestic and world coal markets. Prices collapsed during the recession in 2009, and they partially recovered as expectations for the economy improved in 2010. However, the downturn in demand for U.S.

coal in 2012 caused prices to collapse to near the lows of the recession, and they are similar to prices seen in 2005, when production costs were much lower.



### C. Increasingly Adverse Regulatory Requirements

23. The coal industry has also been disrupted by a growing set of regulatory requirements adversely affecting coal demand and increasing the costs of coal production.

24. The electric power industry has been beset with a number of new environmental regulations which have reduced growth in new coal generation capacity and will continue to reduce coal demand over the next 5 years. These regulations affect coal-fired power plants and their ability to continue burning coal. The most significant of the new regulations are summarized below:

- Mercury and Air Toxics Standard (“MATS”): The MATS rule was promulgated in April 2012 and requires compliance by April 2015. This new rule will require emissions controls on all existing and new coal-fired power plants to meet emission limits for mercury, hydrogen chloride and particulate matter. For eastern coals, such as those produced by Patriot, these standards will require the use of new emission controls for chlorine and mercury and many power plants will be retired rather than upgraded with new controls.
- Regional Haze: Coal-fired power plants built before the imposition of new source performance standards are subject to rules requiring the use of Best Available Retrofit Technology (“BART”) if they are found to impair visibility at a Class 1 area (e.g., national parks). The cost of meeting the BART standard for sulfur dioxide and nitrogen oxide emissions is causing some coal-fired power plants to close rather than invest in new controls.
- New Source Review: EPA has brought litigation against most of the owners of coal-fired power plants, claiming that they have performed major maintenance projects which resulted in increased emissions without obtaining a modified permit to meet new source standards. Almost all of these cases are settled with a formula that includes investing in new controls at some existing coal-fired plants while closing some older coal-fired plants, paying a fine and performing some environmental projects.
- Greenhouse Gases: EPA has proposed new source performance standards for all new power plants, requiring them to meet an emission limit for carbon dioxide. The practical effect of this standard is that it will restrict construction of new coal-fired units by imposing standards that are impossible to meet without carbon capture and storage, a technology which is not feasible at the present time.

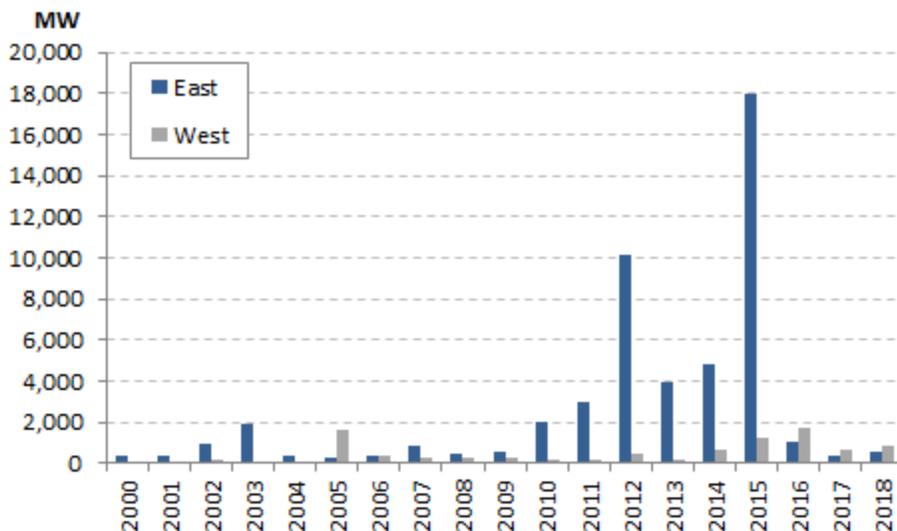
25. The impact of these new restrictions on coal-fired electricity generation has been to cause electric power companies to announce plans to close many existing coal-fired plants and to cancel plans to build new coal-fired plants. Since 2009, power companies have announced<sup>4</sup> plans to close 349 existing coal-fired units in the period 2011-2018, with total generating capacity over 51,000 MW, while only 4 new coal units with total capacity of 2,213 MW are under construction and planned to come online after 2012. The planned closures are almost all

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<sup>4</sup> Public announcements through the end of February 2013.

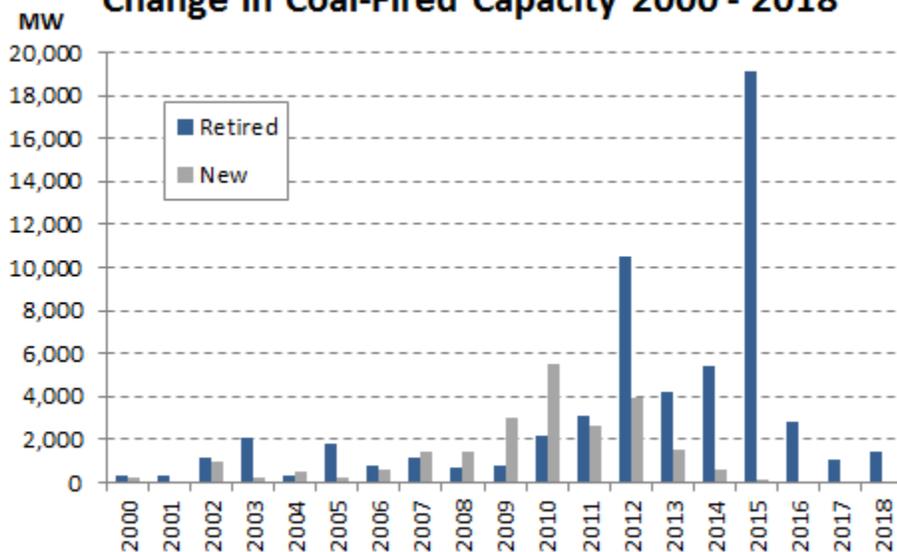
in the eastern United States and mostly burn eastern coal, such as that produced by Patriot. The announced closures amount to 20% of existing coal-fired capacity in the East.

### Announced Coal Plant Retirements 2000 - 2018



Source: EVA analysis of public regulatory filings

### Change in Coal-Fired Capacity 2000 - 2018

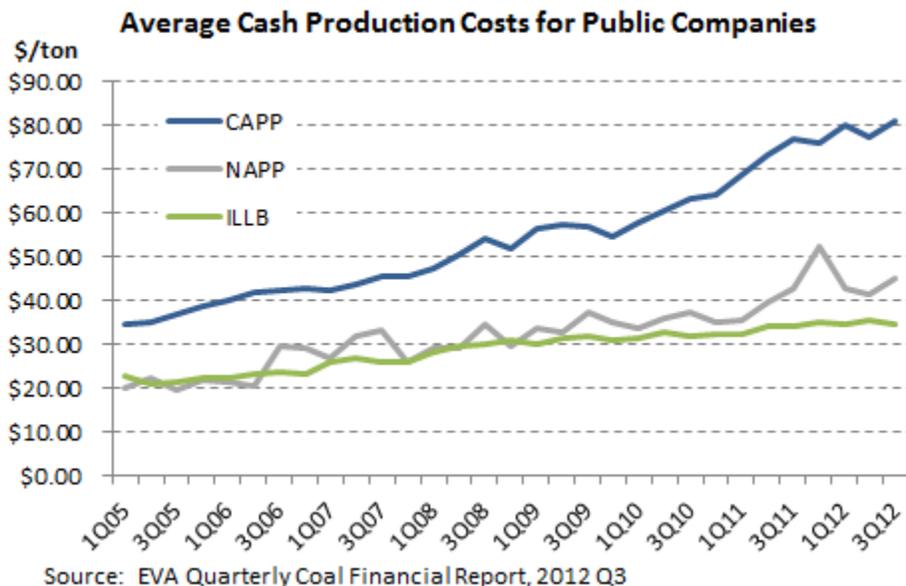


Source: EVA analysis of public regulatory filings

26. New adverse regulations are also restricting the production of coal, especially in regions where Patriot operates. New standards have made it more difficult to obtain mining permits and have increased the cost of coal production, including:

- Limits on permits for disposal of waste rock in the coal-mining process have restricted coal operations, especially in Appalachia.
  - While commonly seen as limiting “mountaintop removal mining,” the new limits on downstream water quality have made all mining more expensive, including waste disposal from preparation plants for underground mines.
  - Smaller areas for valley fills used for the disposal of excess mining rock have meant that companies must truck waste rock back to the pit, significantly increasing the costs of surface mining.
  - New limits on selenium discharges have required companies like Patriot to invest in expensive water treatment systems to continue mining.
- New underground mine safety regulations have been imposed as a result of the MINER Act of 2006, which has required investments in mine safety equipment and changes in operating practices, which have reduced mine productivity and increased costs.
- Pending new regulations to protect surface waters from disturbance by mining (the re-write of the “stream buffer rule”) could further restrict both surface and underground mining.
- EPA has been conducting an “enhanced” review of coal mining permits based on potential impacts to water quality, holding up approval of new mine permits and, in one case, invalidating existing permits.

27. The impact of these new regulations has been to increase mining costs while reducing demand, putting greater pressure on coal mine operators to reduce costs where they can be controlled, including labor costs. The average cash costs of production reported by public coal companies have more than doubled for Appalachian production since 2005.



**D. The Inherent Volatility of Coal Markets**

28. Coal markets are inherently volatile, and that volatility has been increasing in recent years. Coal demand fluctuates due to many factors. In the electric power sector, coal-fired generation is no longer “baseload,” meaning that the output of coal-fired plants is not steady; it swings with the demand for electricity. The demand for electricity varies seasonally and with changes in the economy. Notably, the demand for electricity, and thus coal burn for electricity generation, varies with the weather. The winter of 2011-12 was significantly milder than normal, reducing demand for electricity and thus coal-fired generation. This was a proximate factor in the collapse of thermal coal prices in early 2012. The winter of 2012-13 has also been milder than normal.

29. Export markets have always been volatile, as the demand for U.S. coal varies with the coal demand in many countries overseas, as well as the supply of coal from competing countries and the currency exchange rates, which influence what coals are most economical in the world market. The emergence of China since 2009 as one of the largest import markets in

the world has made world coal markets significantly more volatile and unpredictable. Because China is both the world's largest coal consumer and coal producer (by a factor of three), small changes in the rate of growth of supply and demand in China create large swings in world coal trade and prices. The jump in China's metallurgical coal imports in 2009 quickly increased prices, which had dropped significantly during the 2008 recession, and the cut in China's metallurgical coal imports contributed to world metallurgical prices falling dramatically in the summer of 2012.

30. Changes in production at competing countries can play a major role in establishing the demand for U.S. coal exports and the world market price. In both 2008 and 2011, there were floods in Australia which restricted production and export of metallurgical coal. These events caused world coal prices to soar, tripling in early 2008, and U.S. coal exports to surge in response. In both cases, the end of the restriction on Australian coal production created a glut in world markets and downward pressure on U.S. coal exports and prices.

31. The changes in domestic and world coal markets have caused the length of coal sales contracts to become shorter, with most eastern thermal coal now being sold for periods of less than two years and much of eastern metallurgical coal being priced on a quarterly basis. As a result, coal companies like Patriot do not have predictable sales volumes and prices and must be prepared to quickly adjust production volume to meet the market demand and pricing.

32. The changes in the market require coal producers to have the ability to survive sharp downturns in demand and price, as happened in 2009 and 2012. The volatility of the coal market has grown as coal consumption in the electricity-generation sector is no longer reliable, due to a surplus of natural gas, which frequently makes natural gas-fired generation more economical to operate than coal-fired generation. This makes coal demand more dependent on

fluctuations in the weather and the economy. Further, the increased reliance on the export market makes coal demand dependent on many unpredictable factors, including world economic growth, coal supply in other countries and currency exchange rates. Coal companies cannot buffer the swings in the market with long-term contracts as they have in the past because customers cannot commit to long-term fixed volumes and prices when they face varying demand.

**E. Unexpected Decline in the Market for Patriot's Coal in 2012**

33. Before the start of 2012, coal demand for electric power generation was expected to be fairly stable in 2012, down slightly from 2011. In its Short-Term Energy Outlook published January 10, 2012, the U.S. Department of Energy projected that the consumption of coal in the U.S. electric power sector in 2012 would be 925.1 million tons, down 2.1% from an estimated 944.9 million tons in 2011 (subsequently revised downward to 932.5 million tons when actual totals became available).<sup>5</sup>

34. The extraordinarily warm winter in 2011-12 caused use of electricity and natural gas for heating to decline. Consumption of coal for power generation fell sharply, both because the demand for electricity was lower and because the surplus of cheap natural gas was burned to generate electricity, displacing coal-fired generation. For 2012, coal-fired power generation was down 12.5% nationwide from 2011.<sup>6</sup> The electricity generation market has been even more severely affected in the East, where Patriot sells most of its coal. Coal-fired generation at eastern power plants was down 15.5% in 2012 from 2011.

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<sup>5</sup> U.S. Energy Information Administration, Short-Term Energy Outlook, January 2012, Table 6.

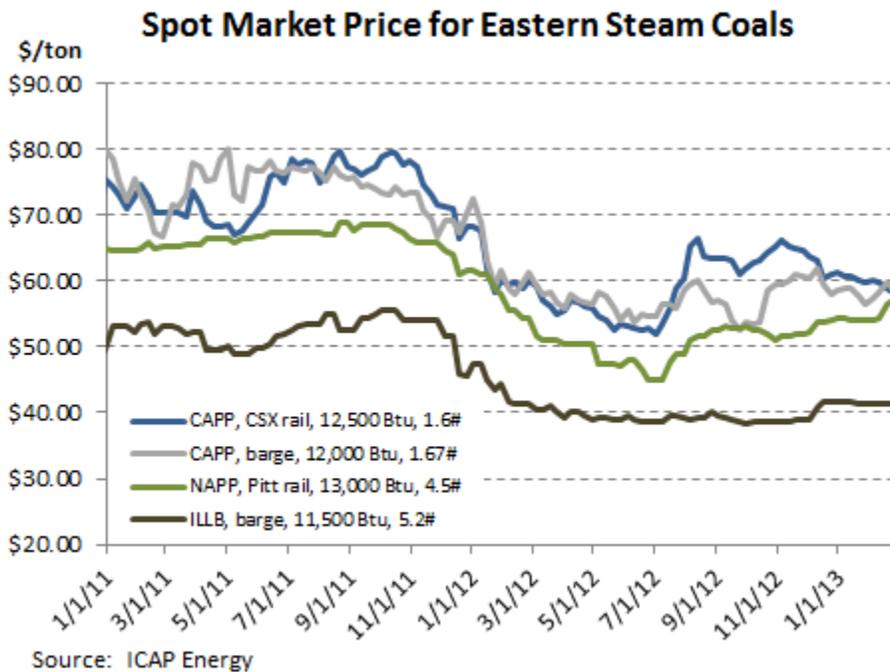
<sup>6</sup> U.S. Energy Information Administration, Electric Power Monthly, February 2013, Table 1.1.

35. In its latest Short-Term Energy Outlook, dated January 2013, EIA now estimates that 2012 coal consumption in the electric power sector was only 829.3 million tons, a decline of 103 million tons, or 11%, from actual 2011 consumption and 95.8 million tons below the 2012 consumption that EIA had projected at the beginning of the year.

36. There are published prices for various types of thermal coal by trade publications and brokers. The thermal coal types most like Patriot's coal are:

- CAPP, CSX rail origin, 12,500 Btu and 1.0% sulfur;
- CAPP, "NYMEX" barge origin, 12,000 Btu and 1.0% sulfur;
- ILLB, barge origin, 11,500 Btu and 5.2 pounds SO<sub>2</sub> per million Btu (3.0% sulfur); and
- NAPP, MGA rail origin, 13,000 Btu and 4.5 pounds SO<sub>2</sub> per million Btu (2.9% sulfur).

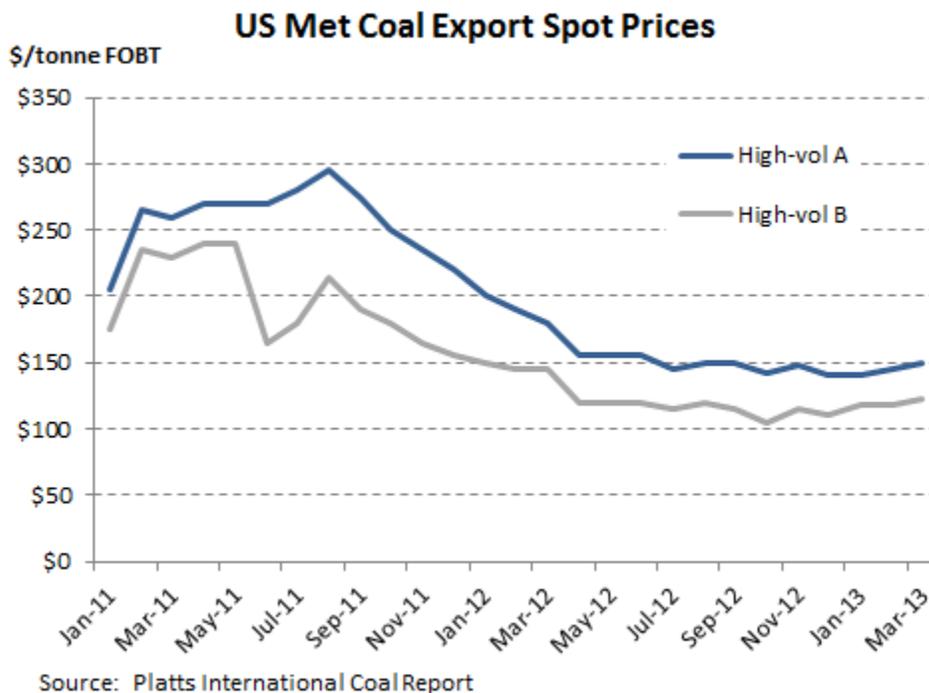
37. The impact of the reduced coal demand began to be felt on these coal market prices in late 2011. Based on data from the brokerage ICAP United Power, the spot market price (for prompt month delivery) for CAPP low-sulfur rail origin coal fell from about \$78.00 per ton at the end of October 2011 to a low point of \$51.85 per ton in June 2012. While the rail origin spot price recovered in late 2012, it ended 2012 at \$61.25 per ton, still 22% below the level of 2011. The market price for high-sulfur NAPP thermal coal was \$68.50 per ton in October 2011, fell to a low of \$45.00 per ton in July 2012, partly rallied to \$54.50 per ton at the end of 2012 and is still 16% below 2011 levels. Market prices for ILLB high-sulfur thermal coal fell from \$54.00 per ton in October 2011 to \$38.50 per ton in July 2012 and have shown little sign of recovery, remaining 23% below the level of 2011 at \$41.75 per ton at the end of 2012.



38. The other principal product from Patriot’s southern West Virginia operations is high-volatile metallurgical coal. The market for this coal was fairly strong in 2011 and the first part of 2012. However, the metallurgical coal market fell significantly during the summer of 2012. The decline in the market was caused by decreased demand for coal from steelmakers in Europe and China due to an economic slowdown as well as increased supply of metallurgical coal from the United States and other competing suppliers in Australia, Mongolia, Canada and Mozambique.

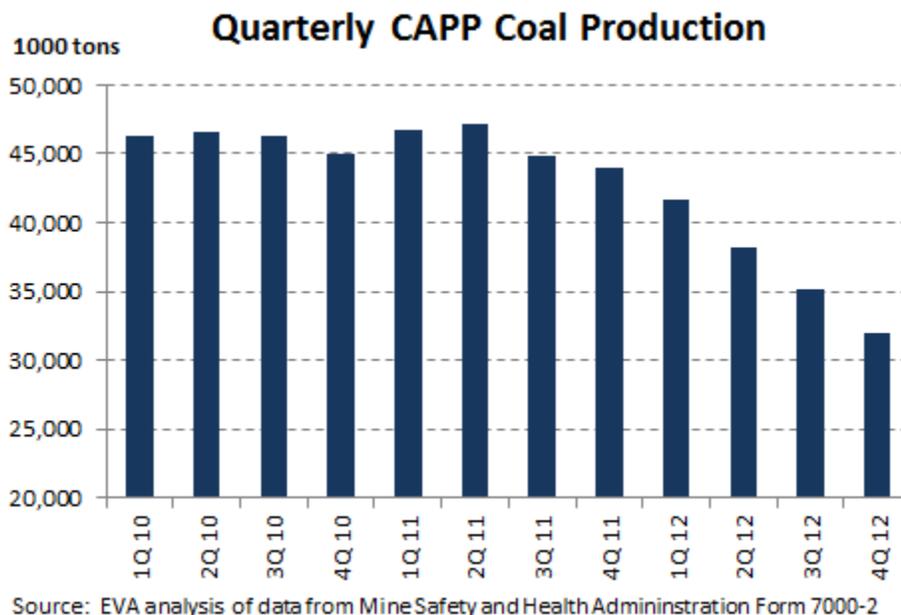
39. The market price for U.S. metallurgical coal exports is reported by trade publications such as Platts International Coal Report. According to the monthly survey published by Platts, the export market price for U.S. high-vol A quality metallurgical coal (loaded in a vessel at Hampton Roads) fell over 50% from \$285 per metric ton in August 2011 to

just \$120 per metric ton in July 2012. The spot market price has increased slightly to \$142 per metric ton for January 2013.<sup>7</sup>



40. The precipitous drop in the coal market has caused Appalachian coal producers like Patriot to cut production and close coal mines. Total production of Appalachian coal fell 14.4% from 2008 to 2011 and fell another 12.6% in 2012. Coal companies have reduced their planned capital expenditures to conserve cash to weather the storm. The impact has been especially severe in Central Appalachia, the largest region for Patriot’s coal production and reserves. The quarterly coal production for Central Appalachia reported by producers to the Mine Safety and Health Administration fell from 44.8 million tons in the third quarter of 2011 to just 31.9 million tons in the fourth quarter of 2012, down 28.8%.

<sup>7</sup> The quarterly benchmark price for international low-volatile coking coal has fallen along with the spot price for high-volatile coal, which is the type of coal produced by Patriot.



**PATRIOT’S SECTION 1113 AND 1114 PROPOSALS  
ARE NECESSARY IN LIGHT OF MARKET CONDITIONS**

**A. Patriot Must Reduce Costs to Compete with Producers with Lower Cost Structures**

41. Until the late 1970s, the large majority of coal produced in the eastern United States was produced by mines that were signatory to the NBCWA (and similar “me-too” agreements with the UMWA). Most of the mines in the western United States were either non-union, organized by unions other than the UMWA, or UMWA-organized mines with separate contracts (and not part of the 1950 and 1974 Pension and Benefit Funds (the “Pension Funds” and “Benefit Funds,” respectively)). In the 1970s, a number of eastern coal producers began to open new non-union mines and the share of production represented by the UMWA in the East decreased. A number of existing UMWA-represented companies went out of business and withdrew from the Pension and Benefit Funds. This trend accelerated in the 1980s, and a large UMWA-represented producer, Pittston Coal, negotiated a new contract in 1989, which allowed it to withdraw from the Benefit Funds. The contract settlement resulted in the creation of the

“Coal Commission” and eventually the passage of legislation in 1992, the Coal Industry Retiree Benefit Act (the “Coal Act”). The Coal Act created the new Combined Benefit Fund to replace the Benefit Funds.

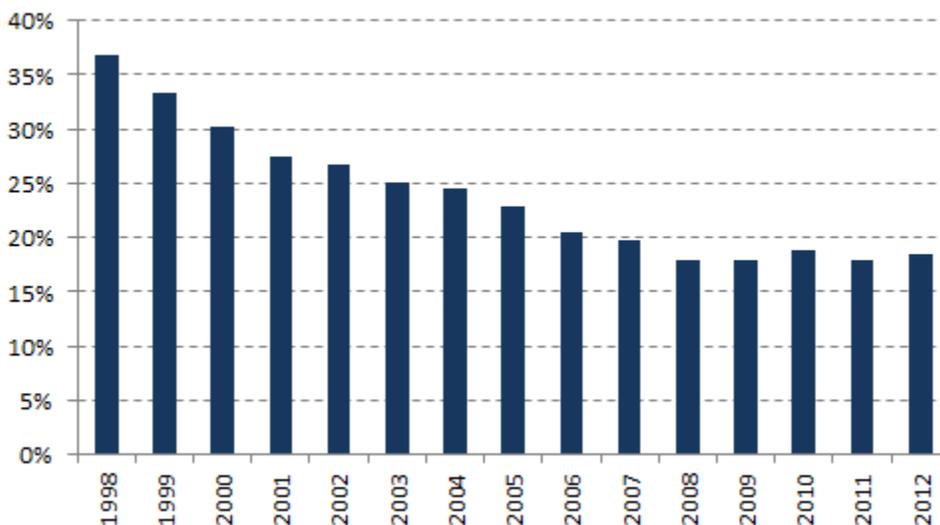
42. At the time of the Coal Act’s passage in 1992, UMWA-represented coal production at mines participating in the Pension Funds was over 230 million tons per year, and about 40% of eastern U.S. coal production.<sup>8</sup> However, many of the existing UMWA-represented mines were older and had been slowly depleting their reserves and closing. In response to the pressures of the coal market, coal companies have been opening new mines with non-union work forces and no complexes with UMWA-represented employees have been built since 1992.<sup>9</sup> As a result of the combination of depletion of existing UMWA-represented mines, almost no success in organizing non-union mines, and no construction of new UMWA-represented complexes, the share of coal produced by operations represented by the UMWA has been declining steadily. Eastern UMWA-represented coal production fell from 208 million tons in 1998 (37% of production) to just 82.5 million tons in 2011 (18%).

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<sup>8</sup> DOE/EIA Coal Industry Annual 1994.

<sup>9</sup> New UMWA-represented mines at existing complexes have replaced depleting mines, but no new UMWA-represented mine complexes have been opened.

### Share of Eastern Coal Produced by UMWA Mines



Source: EVA analysis of data from Mine Safety and Health Administration Form 7000-2

43. The total coal production by mines with UMWA-represented labor that participated in the Pension Funds in 2012 was 81.1 million tons (down from 82.5 million tons in 2011), just 8% of total U.S. coal production. This included just one mine west of the Mississippi River (PacifiCorp’s Deer Creek mine). In the East, 2012 coal production represented by the UMWA was 77.8 million tons, 19% of total eastern coal production. UMWA-represented coal production was concentrated in three eastern subregions: the Pittsburgh seam, Alabama, and southern West Virginia.

**US and UMWA Coal Production 2012**

1000 tons

Region	State/Subregion	UMWA Mines		Other Union	Non Union	Total	NBCWA Share
		NBCWA	Other				
	Maryland				2,239	2,239	0%
	N. West Virginia				9,893	9,893	0%
	Ohio				13,601	13,601	0%
	Pennsylvania		162		18,996	19,158	0%
	Pittsburgh Seam	49,432			30,400	79,832	62%
<b>Northern Appalachia</b>		<b>49,432</b>	<b>162</b>	<b>0</b>	<b>75,130</b>	<b>124,724</b>	<b>40%</b>
	East Kentucky			751	48,073	48,824	0%
	S. West Virginia	10,733			67,207	77,940	14%
	Tennessee				1,348	1,348	0%
	Virginia	703		305	17,901	18,909	4%
<b>Central Appalachia</b>		<b>11,436</b>	<b>0</b>	<b>1,056</b>	<b>134,529</b>	<b>147,021</b>	<b>8%</b>
	Alabama	13,026			6,346	19,372	67%
<b>Appalachia Total</b>		<b>73,894</b>	<b>162</b>	<b>1,056</b>	<b>216,004</b>	<b>291,116</b>	<b>25%</b>
	Illinois		811	2,086	45,589	48,486	0%
	Indiana				36,330	36,330	0%
	West Kentucky	3,951			38,092	42,043	9%
<b>Illinois Basin</b>		<b>3,951</b>	<b>811</b>	<b>2,086</b>	<b>120,012</b>	<b>126,860</b>	<b>3%</b>
<b>EAST TOTAL</b>		<b>77,845</b>	<b>973</b>	<b>3,142</b>	<b>336,016</b>	<b>417,976</b>	<b>19%</b>
	Wyoming				388,376	388,376	0%
	Montana		2,758	10,732	17,200	30,690	0%
<b>Powder River Basin</b>		<b>0</b>	<b>2,758</b>	<b>10,732</b>	<b>405,576</b>	<b>419,066</b>	<b>0%</b>
	Colorado		2,027	2,301	24,241	28,569	0%
	Montana				5,708	5,708	0%
	New Mexico				9,872	9,872	0%
	South Wyoming		4,645	5,524	2,896	13,065	0%
	Utah	3,295			13,552	16,847	20%
<b>Rockies</b>		<b>3,295</b>	<b>6,672</b>	<b>7,825</b>	<b>56,269</b>	<b>74,061</b>	<b>4%</b>
	Louisiana				3,979	3,979	0%
	Mississippi				2,953	2,953	0%
	Texas			31,032	13,146	44,178	0%
	Montana			296		296	0%
	North Dakota		2,314	4,325	20,890	27,529	0%
<b>Lignite</b>		<b>0</b>	<b>2,314</b>	<b>35,653</b>	<b>40,968</b>	<b>78,935</b>	<b>0%</b>
	Alaska			2,052		2,052	0%
	Arizona		7,493			7,493	0%
	Arkansas				98	98	0%
	Kansas				16	16	0%
	Missouri				422	422	0%
	New Mexico			12,580		12,580	0%
	Oklahoma				1,054	1,054	0%
<b>Other West</b>		<b>0</b>	<b>7,493</b>	<b>14,632</b>	<b>1,590</b>	<b>23,715</b>	<b>0%</b>
<b>WEST TOTAL</b>		<b>3,295</b>	<b>19,237</b>	<b>68,842</b>	<b>504,403</b>	<b>595,777</b>	<b>1%</b>
	Anthracite		533		1,820	2,353	0%
<b>U. S. TOTAL</b>		<b>81,140</b>	<b>20,743</b>	<b>71,984</b>	<b>842,239</b>	<b>1,016,106</b>	<b>8%</b>

Source: EVA analysis of 2012 Mine Safety & Health Administration data

44. Nine eastern coal companies have operations with UMWA-represented employees (including a few contract miners who operate mines for these companies). A brief description of the companies' UMWA-represented operations follows.

**Eastern UMWA Production by Company  
1000 Tons**

	<b>2011</b>	<b>2012</b>
Consol Energy	30,341	28,810
Patriot Coal	17,316	14,234
Alpha Natural Resources	10,627	11,513
Walter Energy	8,440	8,917
Murray Energy	6,416	5,768
Cliffs Natural Resources	1,798	4,641
Mechel Bluestone	3,399	2,060
Drummond	1,761	1,287
Springfield Coal	935	811
	<b>81,034</b>	<b>78,041</b>

- Consol Energy (“Consol”) has 5 large underground mines producing high-sulfur thermal coal in the Pittsburgh seam (NAPP region);
- Alpha Natural Resources (“Alpha”) has 2 large underground mines producing high-sulfur thermal coal in the Pittsburgh seam (NAPP region) and 3 smaller underground mines producing metallurgical coal in Virginia (CAPP region);
- Walter Energy (“Walter”) has 2 large underground mines in Alabama producing low-volatile metallurgical coal (Southern Appalachia region);
- Murray Energy has 1 large underground mine producing high-sulfur thermal coal in the Pittsburgh seam in Ohio;
- Cliffs Natural Resources (“Cliffs”) has 2 large underground mines producing low-volatile metallurgical coal in southern West Virginia (CAPP region) and Alabama;
- Mechel Bluestone (“Mechel”) has 3 complexes producing metallurgical coal in southern West Virginia (CAPP region);
- Drummond has one large underground mine producing metallurgical coal in Alabama; and

- Springfield Coal has one underground mine producing high-sulfur thermal coal in Illinois (ILLB region). It is reported that Springfield has a union contract much different from the NBCWA and does not contribute to the 1974 Pension Fund.

45. Patriot is the most heavily unionized coal company of any of the 14 largest U.S. coal companies (which produce over 12 million tons per year), with a greater percentage of its coal production attributable to UMWA-represented labor than any of the other companies. Approximately 57% of Patriot's total coal production is produced at UMWA-represented mines, and that production is concentrated at Patriot's largest mines (Federal #2, Highland, Corridor G and Logan County), which have larger reserves and more capital invested in high-production mining equipment (e.g., longwall and dragline).

46. Patriot operates the only mine—Highland—represented by the UMWA (under a contract with terms similar to the National Bituminous Coal Wage Agreement) in the entire Illinois Basin.<sup>10</sup> Patriot's lone UMWA-represented mine accounted for just 3.1% of the ILLB production in 2012 and competes in the market against non-union mines.

47. In Central Appalachia, Patriot is the only producer of thermal coal from UMWA-represented operations. Patriot has large thermal coal mines at the Corridor G, Logan County and Big Mountain<sup>11</sup> complexes, where the hourly employees are represented by the UMWA. Total thermal coal production from these mines was 7.4 million tons in 2011 (including 1.1 million tons at Big Mountain) and 5.0 million tons in 2012. The total production of steam coal in CAPP in 2012 was 83.4 million tons, of which 94.0% was produced by non-union mines and 6.0% was produced by Patriot's UMWA-represented mines.

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<sup>10</sup> The only other mine with UMWA-represented employees (operated by a contractor for Springfield Coal) has a non-conforming labor contract.

<sup>11</sup> The Big Mountain mine complex was closed in early 2012.

48. The total U.S. production of metallurgical coal in 2012 was approximately 85.5 million tons, all of which was produced in Appalachia (CAPP was the largest share at 63.7 million tons). UMWA-represented labor (including Patriot) produced a total of 16.6 million tons of metallurgical coal (19.4% of the total). Most of the mines with UMWA-represented labor (owned by Cliffs, Drummond, Walter, Alpha and Mechel) produce low-volatile and mid-volatile coal (13.9 out of 39.2 million tons total). Patriot produces high-volatile metallurgical coal, which is lower-valued than the low-volatile and mid-volatile coals. The total production of high-volatile metallurgical coal in 2012 was 42.65 million tons, of which only 2.65 million (6.2%) were produced by UMWA-represented labor at mines owned by Patriot, Alpha or Mechel. Patriot's mines with UMWA-represented labor produced 1.2 million tons of metallurgical coal in 2012, almost half of the total UMWA production. Almost all of the competition that Patriot faces in the high-volatile metallurgical coal market is produced by non-union mines.

49. The only market in which UMWA-represented mines have a large market share is the NAPP high-sulfur thermal coal market. In 2012, coal produced by mines in this region with UMWA-represented labor totaled 49.4 million tons from 9 large longwall mines in the Pittsburgh seam, which account for 40% of the total production in the NAPP region. However, non-union coal production in the Pittsburgh seam will continue to expand as Alliance Coal's Tunnel Ridge mine reaches full output, Murray Energy expands the Century mine and Consol expands the Bailey mine. Further, there are plans for new mines in the Pittsburgh seam in the future, which are likely to be non-union, as Alliance Coal is planning the new Penn Ridge mine, Alpha is planning the new Foundation mine, and Murray Energy is planning the new American Mountaineer mine. As opposed to its competitors, Patriot has no undeveloped Pittsburgh-seam coal reserves that it can develop with new non-union coal mines. Patriot's Federal #2 mine must

compete with the new and existing non-union mines as well as the 8 other UMWA-represented mines.

50. Patriot’s production costs at its large Highland mine are much higher than its non-UMWA competitors in the Illinois Basin. Based upon public financial reports filed with the Securities and Exchange Commission (“SEC”) that disclose segment financial data for operations in the Illinois Basin, Patriot’s Highland mine had cash production costs much greater than average for the region (\$9.72 higher per ton in 2011 and \$9.74 higher per ton in 2012) and well above the next-highest cost company (\$4.19 higher per ton in 2011 and \$5.53 higher per ton in 2012). While Highland was not Patriot’s highest-cost mine in the Illinois Basin in 2012, Patriot has taken steps to reduce its costs by closing its non-union Bluegrass complex.

**Public Financial Results for Illinois Basin Producers**

Company	2011			2012		
	Coal Sales 1000 tons	Sales Price \$/ton	Cash Cost \$/ton	Coal Sales 1000 tons	Sales Price \$/ton	Cash Cost \$/ton
Patriot Coal*	7,265	\$42.89	\$44.56	6,385	\$49.88	\$43.49
James River Coal	2,480	\$42.49	\$37.87	2,327	\$44.30	\$38.85
Vectren Corp.	5,200	\$50.93	\$36.97	4,500	\$48.45	\$38.30
Peabody Energy	29,100	\$48.21	\$34.37	27,400	\$51.21	\$35.63
Armstrong Energy	7,030	\$42.57	\$31.52			
Alliance Resource Partners	25,561	\$50.45	\$30.75	28,294	\$52.51	\$31.62
Hallador Energy	3,307	\$41.73	\$23.31	3,006	\$43.70	\$26.53
Foresight Energy	8,773	\$45.87	\$19.85			
<b>Total/Average</b>	<b>88,716</b>	<b>\$47.50</b>	<b>\$32.34</b>	<b>71,912</b>	<b>\$50.89</b>	<b>\$34.64</b>
Patriot - Highland Mine*	3,979	\$40.28	\$42.06	3,951	\$49.62	\$44.38

\* Highland mine included in Patriot average above

Sources: SEC forms 10-K and S-1 and earnings releases; Patriot income statements

Note: Armstrong Energy and Foresight Energy have not filed updated forms S-1 for 2012

**B. Patriot's Union Wages and Benefits Are  
Dramatically Out of Line with Its Non-Union Costs**

51. Patriot's labor costs at its union mines are far above its labor costs at its non-union operations. The best measure of the direct cost of the UMWA labor contract is dollars per hour worked. This analysis takes into account not just the direct wage rates but also the indirect costs of paid time off, bonuses, health insurance, workers' compensation and post-retirement costs. In addition, the provisions of the UMWA labor contracts affect the productivity of the mine (measured in tons per hour worked). This indirect cost can also be significant, as in the effect of requiring continuous miner helpers, which increases the amount of labor needed to mine the same amount of coal. Patriot's labor costs per hour worked in 2012 for its UMWA-represented and non-union operations are shown below, separated for the Illinois Basin mines and the Appalachian mines and by mine type (underground, surface and surface facilities).<sup>12</sup>

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<sup>12</sup> The analysis of Patriot's Appalachia non-union labor costs excludes the Kanawha Eagle complex, which was converted from contractor operations during 2012 and for which the payroll data are incomplete.



52. Even excluding the impact of retiree healthcare (both the non-cash accrual for active and retired workers and the payments to the 1992 UMWA Benefit Fund), UMWA labor costs per hour worked were substantially greater than non-union labor costs in the same region for similar mining operations. In the Illinois Basin, the cost per hour worked at UMWA operations was 20% greater than non-union for underground mines and 50% greater than non-union for surface facilities. In Appalachia, the cost per hour worked at UMWA operations was 20% greater than non-union for underground mines, 45% greater than non-union at surface facilities and 50% greater than non-union at surface mines.

Eliminating this difference would substantially reduce the difference in cost of production between Patriot and its non-union competitors.

53.

54. The cost of paid time off for Patriot's employees represented by the UMWA was substantially higher than for its non-union employees.

55. Another large difference between Patriot's UMWA-represented and non-union labor costs is the cost of insurance (principally healthcare coverage, but also life insurance and disability).

56. The cost of contributions to the UMWA 1974 Pension Fund and other UMWA funds is much greater than the cost of providing pension benefits to Patriot's non-union workers. The contribution rate to the UMWA 1974 Pension Trust in 2012 was \$5.50 per hour. In

addition, the contribution rate to the 1993 Benefit Trust was \$1.10 per hour (\$0.50 per hour at Highland), to the Training and Education Fund was \$0.14 per hour, to the LMPCP Fund was \$0.02 per hour and to the CDSP was \$0.02 per hour.

57. The cost for retiree healthcare is another large difference in labor costs for Patriot's employees represented by the UMWA.

Patriot's non-union employees do not have retiree health benefits, nor are they common in the coal industry for non-union employees.

58. Patriot's mines that operate under the NBCWA (Patriot's two largest mines, Federal #2 and Highland) also have restrictions that have the effect of reducing Patriot's labor productivity (measured in tons produced per hour worked) compared to its non-union competitors with similar mining conditions. The contract restrictions include requiring continuous miner helpers (which increases the number of employees) and limiting the ability to change crews at the face (which reduces the amount of production). The UMWA contract requirement to use a helper for all continuous mining equipment has the effect of adding an extra employee to every production shift without increasing coal production, as the continuous miner operator uses remote control to run the machine. Non-union mines do not use continuous miner helpers. The ability to change crews at the face means that non-union producers can change

production shifts without stopping production and can produce more coal. These work rules cause Federal #2 and Highland to have lower productivity and higher costs than their competitors.

59. Patriot's largest mine, Federal #2, produces high-sulfur thermal coal in the Pittsburgh seam in Northern Appalachia. Including Federal #2, there are 13 large deep mines producing coal from the Pittsburgh seam using the longwall mining technology. These mines produce the large majority of the total production in the NAPP region, averaging almost 80 million tons per year. Of the 13 mines, the 4 newest all have a non-union workforce and have averaged productivity over the last four years significantly better than all but one UMWA-represented mine. These non-union mines are the largest mines in the Pittsburgh seam and are growing production rapidly, with new longwalls recently added at Century and Tunnel Ridge and a new longwall being developed at Bailey, which is scheduled to start in 2014. With these new additions, non-union production will be over half of the total production in the Pittsburgh seam and these mines will have superior labor productivity and lower production costs.

**Coal Production and Labor Productivity at Pittsburgh Seam Longwall Mines**

Company	Mine	ST	Union	Tons Per Hour					Tons Produced				Total
				2009	2010	2011	2012	Avg.	2009	2010	2011	2012	
Murray Energy	Century	OH	None	6.03	6.24	6.34	6.73	6.36	6,033,455	6,214,246	7,080,629	8,446,709	27,775,039
Consol Energy	Enlow Fork	PA	None	6.97	6.07	6.24	5.44	6.16	11,092,684	9,941,681	10,190,255	9,459,485	40,684,105
Murray Energy	Powhatan	OH	UMWA	6.30	6.12	5.65	4.73	5.67	6,732,699	6,378,070	6,415,744	5,767,737	25,294,250
Alliance Resource	Tunnel Ridge	WV	None				5.38	5.38	-	-	-	1,580,447	1,580,447
Consol Energy	Bailey	PA	None	5.72	5.49	4.93	3.82	4.88	10,232,360	10,607,451	10,833,141	10,122,862	41,795,814
Consol Energy	McElroy	WV	UMWA	4.96	4.88	4.32	4.45	4.64	9,863,588	10,094,681	9,253,481	9,400,485	38,612,235
Alpha	Cumberland	PA	UMWA	4.80	4.23	4.25	4.87	4.53	6,818,681	5,764,385	6,185,076	6,425,363	25,193,505
Consol Energy	Loveridge	WV	UMWA	5.05	4.59	3.96	4.25	4.44	6,004,124	5,869,034	5,638,973	5,869,454	23,381,585
Consol Energy	Robinson Run	WV	UMWA	4.66	4.44	4.47	3.90	4.36	5,544,554	5,499,559	5,958,158	4,992,046	21,994,317
<b>Patriot Coal</b>	<b>Federal #2</b>	<b>WV</b>	<b>UMWA</b>	<b>4.09</b>	<b>4.07</b>	<b>3.35</b>	<b>3.56</b>	<b>3.74</b>	<b>3,810,192</b>	<b>3,731,625</b>	<b>3,744,764</b>	<b>4,044,937</b>	<b>15,331,518</b>
Consol Energy	Blacksville #2	WV	UMWA	3.33	3.79	3.67	3.27	3.53	3,768,844	4,507,606	4,341,984	3,231,148	15,849,582
Alpha	Emerald	PA	UMWA	4.44	3.68	2.74	3.31	3.53	5,558,640	4,901,640	3,713,206	4,384,253	18,557,739
Consol Energy	Shoemaker	WV	UMWA		2.82	3.43	3.40	3.23	-	3,849,862	5,148,574	5,316,374	14,314,810
				<b>5.19</b>	<b>4.73</b>	<b>4.46</b>	<b>4.33</b>	<b>4.65</b>	<b>75,459,821</b>	<b>77,359,840</b>	<b>78,503,985</b>	<b>79,041,300</b>	<b>310,364,946</b>
	Total	Non-union		6.25	5.86	5.68	4.99	5.64	27,358,499	26,763,378	28,104,025	29,609,503	111,835,405
	Total	UMWA		4.73	4.29	3.99	4.01	4.23	48,101,322	50,596,462	50,399,960	49,431,797	198,529,541

Source: Data filed with the Mine Safety and Health Administration

Note: Data excludes production and hours worked prior to longwall starts at the Tunnel Ridge and Shoemaker mines

60. The Federal #2 mine has had labor productivity consistently below average and ranks near the bottom of all of the Pittsburgh seam mines. With the expansion of production from the lower-cost non-union mines, Federal #2 will have to reduce costs in order to remain a viable mine.

61. Patriot's second-largest mine is the Highland mine, which produces high-sulfur thermal coal in the Illinois Basin. The labor productivity at the Highland mine is 20% below average for all deep mines in the ILLB, and its competitive position is deteriorating. New lower-cost mines have been started in the last six years and are now the 7 mines with the highest labor productivity in the region. Conversely, 5 mines with productivity lower than Highland have been closed in the last two years. Highland will have to improve productivity as well as labor costs in order to remain a viable competitor in this region.

### Illinois Basin Deep Mine Labor Productivity

State	Company	Mine	2010		2011		2012	
			Tons	tph	Tons	tph	Tons	tph
IL	Foresight	Williamson	5,795,493	18.41	7,226,500	23.83	7,528,061	21.21
IL	Foresight	Sugar Camp	324,493	2.42	855,868	2.77	4,690,260	9.41
IL	Foresight	Hillsboro	20,639	0.57	491,227	3.17	2,365,356	9.16
IL	Foresight	Shay	1,027,224	8.80	1,829,122	9.17	1,702,286	8.81
IL	Knight Hawk	Prairie Eagle South	843,955	7.67	958,919	7.48	980,937	8.26
IL	Knight Hawk	Prairie Eagle	1,573,202	7.63	1,750,702	7.71	1,856,866	6.60
KY	Alliance Resources	River View	5,830,052	5.23	7,582,894	5.69	8,622,321	6.36
IL	Peabody	Gateway	3,197,579	6.72	3,334,776	7.07	2,766,139	6.08
KY	Alliance Resources	Warrior	5,841,599	6.15	5,405,577	5.52	5,236,375	4.92
IL	Prairie State	Lively Grove			1,002,059	3.10	2,818,895	4.80
IN	Peabody	Francisco UG	2,717,925	5.10	2,966,915	4.84	2,756,107	4.68
IN	Vectren	Oaktown #1	1,014,967	3.51	2,667,948	4.42	2,754,018	4.64
IN	Alliance Resource	Gibson North	3,124,104	4.65	3,376,883	4.62	3,432,223	4.59
IN	Sunrise Coal	Carlisle	3,046,605	4.68	3,297,226	5.05	3,008,106	4.58
IL	Murray Energy	New Future	616,533	3.33	1,783,046	2.39	3,642,169	4.50
IL	Murray Energy	New Era	5,774,752	4.30	4,963,211	4.86	4,550,318	4.20
KY	Armstrong Coal	Parkway	1,485,914	4.46	1,444,797	4.26	1,558,309	4.03
IL	Peabody	Wildcat Hills	748,814	3.41	1,018,030	3.46	1,457,906	3.84
KY	Alliance Resources	Richland	55,786	1.31	45,069	0.78	640,335	3.77
<b>KY</b>	<b>Patriot Coal</b>	<b>Highland</b>	<b>3,466,447</b>	<b>3.65</b>	<b>3,886,256</b>	<b>3.86</b>	<b>3,950,732</b>	<b>3.66</b>
IL	Arch (ICG)	Viper	2,475,257	4.54	2,098,366	3.99	2,108,054	3.65
KY	Alliance Resources	Elk Creek	3,340,502	4.00	3,335,001	3.84	3,068,895	3.53
KY	Armstrong Coal	Kronos			182,679	1.53	1,840,854	3.53
KY	Alliance Resources	Onton #9	1,989,390	3.33	2,130,480	3.34	2,143,828	3.28
IN	James River	Freelandville UG	541,924	3.82	384,000	3.10	368,964	3.28
IL	Alliance Resources	Pattiki	1,657,057	2.79	2,199,078	2.91	2,380,484	3.19
KY	Alliance Resources	Dotiki	3,882,127	3.64	3,600,109	3.23	3,363,050	3.16
<b>KY</b>	<b>Patriot Coal</b>	<b>Freedom *</b>	<b>1,114,036</b>	<b>2.60</b>	<b>1,240,057</b>	<b>2.88</b>	<b>504,708</b>	<b>2.97</b>
IN	James River	Freelandville West	15,305	0.95	167,888	2.24	303,527	2.92
KY	Murray Energy	Paradise #9	1,044,215	2.29	1,758,880	3.04	2,251,294	2.85
IN	Peabody	Air Quality #1*	1,141,192	2.67	1,150,108	2.34	862,249	2.49
IL	Peabody	Willow Lake*	2,920,225	3.01	2,234,623	2.16	2,086,367	2.41
IN	Vectren	Prosperity	2,684,633	3.08	2,457,960	2.91	2,072,357	2.40
<b>KY</b>	<b>Patriot Coal</b>	<b>Dodge Hill</b>	<b>927,521</b>	<b>2.40</b>	<b>864,009</b>	<b>2.17</b>	<b>901,849</b>	<b>2.22</b>
IL	Springfield Coal	Crown III	1,310,941	2.07	934,682	1.99	811,103	2.07
KY	Armstrong Coal	Big Run*	572,056	1.75	427,017	1.77		
	<b>Total All Deep Mines</b>		<b>72,122,464</b>	<b>4.25</b>	<b>81,051,962</b>	<b>4.22</b>	<b>91,385,302</b>	<b>4.54</b>
	Patriot Coal	Total	5,508,004	3.12	5,990,322	3.26	5,357,289	3.24

\* Closed

Source: Data filed with the Mine safety and Health Administration

Note: Includes deep and surface labor, no prep and office, for producing mines

**C. Patriot Has Huge Long-Term Liabilities for Labor and Environmental Costs in Excess of Its Competitors**

62. Patriot has accrued massive liabilities for future labor and environmental costs. The largest liability is the cost of future medical obligations for existing and future retirees and dependents, which had a book value of \$1.61 billion at the end of 2012. Patriot's long-term labor liabilities also include workers' compensation (traumatic and occupational disease) as well as obligations to the UMWA funds imposed by the Coal Act, which total \$289 million.<sup>13</sup> The total accrued long-term liabilities for future labor costs were \$1.89 billion. Patriot also has accrued large long-term liabilities for future environmental costs, including reclamation and water treatment costs. These liabilities totaled \$0.72 billion at the end of 2012.

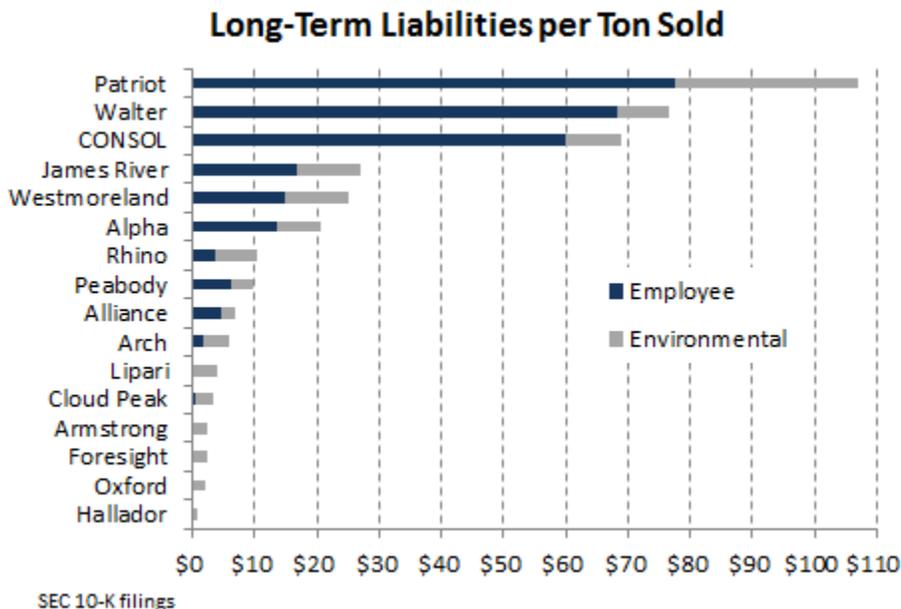
63. As measured by dollars per produced ton sold,<sup>14</sup> Patriot's total long-term labor and environmental liabilities exceed those of all other U.S. coal producers. In 2012, Patriot sold 24.4 million tons of produced coal and its long-term liabilities were \$107.03 per ton of coal sold. There were only two other public companies that had long-term liabilities in excess of \$27 per produced ton sold in 2012, Walter and Consol, both of which have large assets outside of U.S. coal production to help support these costs. Most of the other public coal companies reported long-term liabilities less than \$10 per ton sold.<sup>15</sup>

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<sup>13</sup> Patriot, however, has not accrued liabilities for future payments to the under-funded 1974 Pension Trust, including possible withdrawal liabilities.

<sup>14</sup> This measure of comparison compares liabilities to amount of coal production that can support paying for these accrued costs.

<sup>15</sup> Data for calendar year 2012 were not yet available for the following public companies: Oxford, Foresight, Armstrong, Lipari and James River. For these companies, the analysis used data for calendar year 2011.



**D. The Section 1113 and 1114 Proposals Are Necessary to Patriot’s Ability to Compete in the Industry**

64. I have reviewed Patriot’s Section 1113 and 1114 proposals, as well as the savings estimates prepared by Patriot and the backup thereto. The proposals reduce Patriot’s labor and healthcare costs to a level similar to that of its non-union operations and the non-union operations with which its mines compete in the coal market, and they are designed to ensure that Patriot has long-term viability.

65. The changes proposed by Patriot under Section 1113 are to, among other things, reduce wages and pension contributions and change work rules to bring Patriot closer to the conditions prevailing in non-union operations. Patriot has estimated that the proposed changes under Section 1113 will reduce labor compensation by more than \$78 million in 2013 (annualized to the full year), and the proposed work rule changes would have the effect of increasing productivity at the UMWA-represented mines. These changes would make Patriot’s labor costs competitive with the costs of non-union coal producers.

66. The changes proposed by Patriot under Section 1114 are to replace the healthcare obligation for retirees not covered by the Coal Act with a Voluntary Employee Beneficiary Association (“VEBA”) trust. Patriot proposes to fund the VEBA trust with an initial contribution of \$15 million, a provision for future contributions based on profit sharing by Patriot, and an allowed unsecured claim against Patriot’s estate. While Patriot’s long-term liabilities under this proposal may still be greater than most public U.S. coal companies, they could place Patriot at a level similar to Alpha and James River, two other large producers in Appalachia.

67. The thermal coal market has been contracting since 2008, due in large part to heavier regulation of coal-fired power plants and competition from cheap natural gas. The metallurgical coal market, too, has seen weak demand for Appalachian coal because of growing international sources. These are not temporary conditions, and the coal market looks to remain weak in the near future. As a result, coal producers have been closing their highest-cost mines, leaving only the most competitive in the market.

68. Even if a recovery of the coal markets were likely, no recovery could be expected to be prolonged. Coal markets are extremely volatile because coal demand fluctuates with the weather, the economy, the price of natural gas and other factors beyond the industry’s control. Long-term contracts are becoming less common because coal consumption cannot be predicted with certainty; coal companies are thus unable to hedge against further downturns. To be competitive, coal producers must therefore have cost structures that enable them to compete even when market demand and prices are in depressed periods, as they are today.

69. Patriot is heavily unionized relative to its peers, and the labor agreements to which it is subject dramatically increase its per-ton cost to produce coal. At certain of its

operations where labor is represented by the UMWA, Patriot's labor costs per hour worked are nearly double those at its comparable non-union operations. Across all categories, Patriot's unionized operations are significantly more expensive per hour worked than are those that are non-union. Company-wide, its long-term liabilities per ton of coal sold far exceed even those of its nearest competitor and are many times those of most other public coal companies.

70. In my opinion, the savings in labor costs estimated by Patriot are necessary for it to be competitive with other U.S. coal producers. Without these changes, Patriot will continue to be a high-cost producer in a shrinking market, where the high-cost producers will be forced to close mines. A reduction in its labor costs is absolutely critical to Patriot's survival.

I, Seth Schwartz, declare under penalty of perjury that the foregoing is true and correct.

Arlington, Virginia  
Dated: March 14, 2013

/s/ Seth Schwartz  
Seth Schwartz  
President  
Energy Ventures Analysis, Inc.

**Appendix 1**  
**RESUME OF SETH SCHWARTZ**

**EDUCATIONAL BACKGROUND**

B.S.E. Geological Engineering, Princeton University, 1977

**PROFESSIONAL EXPERIENCE**

**Current Position**

Seth Schwartz is the President and co-founder of Energy Ventures Analysis, Inc. Mr. Schwartz directs EVA's coal and utility practice and manages the COALCAST Report Service. The types of projects in which he is involved are described below:

*Fuel Procurement*

Assists utilities, industries and independent power producers in developing fuel procurement strategies, analyzing coal and gas markets, and in negotiating long-term fuel contracts.

*Fuel Procurement Audits*

Audits utility fuel procurement practices, system dispatch, and off-system sales on behalf of all three sides of the regulatory triangle, i.e., public utility commissions, rate case intervenors, and utility management.

*Coal Analyses*

Directs EVA analyses of coal supply and demand, including studies of utility, industrial, export, and metallurgical markets and evaluations of coal production, productivity and mining costs.

*Natural Gas Analyses*

Evaluates natural gas markets, especially in the utility and industrial sectors, and analyzes gas supply and transportation by pipeline companies.

*Expert Testimony*

Testifies in fuel contract disputes and rate cases, including arbitration, litigation and regulatory proceedings, regarding prevailing market prices, industry practice in the use of contract terms and conditions, market conditions surrounding the initial contracts, and damages resulting from contract breach.

Acquisitions and Divestitures

Assists companies in acquisitions and sales of reserves and producing properties, both in consulting and brokering activities. Prepares independent assessments of property values for financing institutions.

**Prior Experience**

Before founding Energy Ventures Analysis, Mr. Schwartz was a Project Manager at Energy and Environmental Analysis, Inc. Mr. Schwartz directed several sizable quick-response support contracts for the Department of Energy and the Environmental Protection Agency. These included environmental and financial analyses for DOE's Coal Loan Guarantee Program, analyses of air pollution control costs for electric utilities for EPA's Office of Environmental Engineering and Technology, Energy Processes Division, and technical and economic analysis of coal production and consumptions for DOE's Advanced Environmental Control Technology Program.

**Publications**

Crerar, D.A., Susak, N.J., Borcsik, M., and Schwartz, S., "Solubility of the Buffer Assemblage Pyrite + Pyrrhotite + Magnetite in NaCl Solutions from 200° to 350°", Geochimica et Cosmochimica Acta (42)1427-1437, 1978.

**EXPERT TESTIMONY**

To the best of Mr. Schwartz's recollection, he has testified as an expert at trial or by deposition in the following cases in the last four years (client is underlined):

**2011**

Elm Street Resources, Inc. v. International Paper Company, U.S. District Court for the Eastern District of Tennessee, Cause No. 3:09-CV-575

Twin Pines Coal Company Inc. v. Colonial Pipeline Company, U.S. District Court for the Northern District of Alabama, Case No. 2:09-cv-1403-SLB

Arbitration between Bachmann, Hess, Bachmann & Garden, PLLC and James C. Justice Companies, Inc., American Arbitration Association No. 50 194 T 0037110

Traxys North America v. Concept Mining, U.S. District Court for the Western District of Virginia, Case No. 1:10-cv-29

Mountain State Carbon LLC v. Central West Virginia Energy Company, Circuit Court of Brooke County, West Virginia, Civil Action No. 08-C-160

**2010**

Arbitration between South Carolina Electric & Gas Company and Sequoia Energy, LLC, American Arbitration Association No. 31 198 Y 00032 09

Administrative Hearing, State of North Carolina, North Carolina Waste Awareness et al. v. Duke Energy Carolinas, 08 EHR 0771

Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., Surface Transportation Board Docket No. 42110

**2009**

TECO Coal Corporation, et al. v. Orlando Utilities Commission, U.S. District Court for the Eastern District of Kentucky, London Division, Case No. 6:07-cv-444

Arbitration between Duke Energy Carolinas LLC and Dynamic Energy, Inc., American Arbitration Association, No. 31 198 Y 00372 08

Arbitration between Bayer Cropscience LP and Central West Virginia Energy, Inc., American Arbitration Association, No. 55 198 Y 00317 08

Final Offer Arbitration between Teck Coal Limited and Canadian Pacific Railway

Arbitration between Central West Virginia Energy and Mountain States Carbon

Philip Morris USA Inc. v. Appalachian Fuels, LLC, U.S. District Court for the Eastern District of Virginia, Case No. 3:08 CV 527 (JRS)

**2008**

EME Homer City Generation L.P. v. Amerikohl Mining Inc., No. 2001-CD-11119 (Pennsylvania Court of Common Pleas, Indiana County)

Gulf Power Company v. Peabody Coalsales Company, U.S. District Court for the Northern District of Florida, Case No. 3:06cv-00270-MCR-MD

The Dayton Power & Light Company v. Appalachian Fuels, LLC, U.S. District Court for the Southern District of Ohio, Case No. 07-CV-118

Bull Creek Coal Corporation v. Alpha Coal Sales Co., LLC, U.S. District Court for the Eastern District of Kentucky, CA No. 7:07-119-GFVT

Lodestar Energy, et al. v. Tennessee Valley Authority, U.S. Bankruptcy Court for the Eastern District of Kentucky, Case No. 01-50969

Arbitration between the Kanawha-Gauley Coal & Coke Company and Kanawha Development Corporation et al., AAA Case No. 55 115 Y 00402 06

**Appendix 2**  
**MATERIALS CONSIDERED**

**I. Resources from Patriot's Data Room**

- 1113/1114 Proposals (Data Room Items 1.2.13, 1.2.15, 1.5.2, 1.5.3, 1.5.5)
- 1113 Savings Summary and presentation (Data Room Items 1.2.14, 1.2.16)
- 1974 Plan Contributions 2009-2012 and Forecast 2013-2016 (Data Room Items 1.2.12.24-25)
- Ability to Hotseat 2013-2016 (Data Room Item 1.2.18.7)
- Attendance Policy 2013-2016 (Data Room Item 1.2.18.8)
- Business Plan Model (Data Room Item 1.2.2.3)
- Complex-Level Hours, Headcount, and Tons 2012-2016 (Data Room Item 1.2.18.12)
- Complex-Level EBITDAs (Data Room Items 1.2.6.5.8, 1.2.11.1)
- Consolidating Income Statement Drillable and updates (Data Room Items 1.2.7.34, 1.2.6.5.14-15)
- Employee Data and supplement (Data Room Items 1.2.11.6, 1.2.11.9)
- Extended Healthcare Savings 2013-2016 (Data Room Item 1.2.18.6)
- Financial Projections Summary Model (Data Room Item 1.2.22.1)
- Healthcare Savings 2013-2016 (Data Room Item 1.2.18.13)
- Helpers on UG Face Equipment 2013-2016 (Data Room Item 1.2.18.9)
- Hourly Payroll Detail 2010-2012 and updates (Data Room Items 1.2.12.34, 1.2.6.5.9-10, 1.2.6.5.12-13)
- Income Statements (Data Room Item 1.2.11.3)
- Mine-Level Profit-Loss (Data Room Item 1.2.27.1)
- Non-Union Hourly Rate Adjustments (Data Room Item 1.2.18.3)
- Payroll Taxes & Workers' Comp Expense and update (Data Room Items 1.2.12.34, 1.2.6.5.11)
- Pension Bonus Fund Savings 2013-2016 (Data Room Item 1.2.18.2)
- Production and Headcount – December 2011 Plan vs. October Bank Plan (Data Room Item 1.2.12.5)
- Projected Headcounts 2013-2016 (Data Room Item 1.2.18.1)
- Rate Schedules 2013-2016 (Data Room Item 1.2.18.11)

- Retiree Healthcare Expense by Mine (2010-2012) (Data Room Item 1.2.12.27)
- Revenue Summary (October 2012 Forecast) (Data Room Item 1.2.27.2)
- Revenue Summary by Mine (October 2012 Forecast) (Data Room Item 1.2.27.3)
- Savings – 2012- Salary-Non-union (Data Room Item 1.2.12.1)
- UMWA Funds Hours Dollars Summary 2010-2012 (Data Room Item 1.2.12.34)
- Use of Contractors 2013-2016 (Data Room Item 1.2.18.10)

## **II. Other Resources**

- Argus Coal Daily, U.S. Coal Market Prices
- CME Group, Henry Hub Natural Gas Prices
- DOE/EIA, Annual Coal Reports (1990-2011)
- DOE/EIA, Annual Energy Review (2011)
- DOE/EIA, Electric Power Monthly (Feb. 2013)
- DOE/EIA, Short-Term Energy Outlook (Jan. 2012)
- DOE/EIA, Quarterly Coal Report (Dec. 2011)
- DOE/EIA, Weekly Natural Gas Futures
- EVA, COALCAST Monthly Stockpile Report (Jan. 2013)
- EVA, Quarterly Coal Financial Report (Q3 2012)
- ICAP Energy, weekly coal prices
- Mine Safety and Health Administration, Form 7000-2 data
- Platts, International Coal Report
- SEC public filings