

APPENDIX 31



Last Updated: Jun. 4, 2012

[Download Full Country Analysis Brief](#)

Background

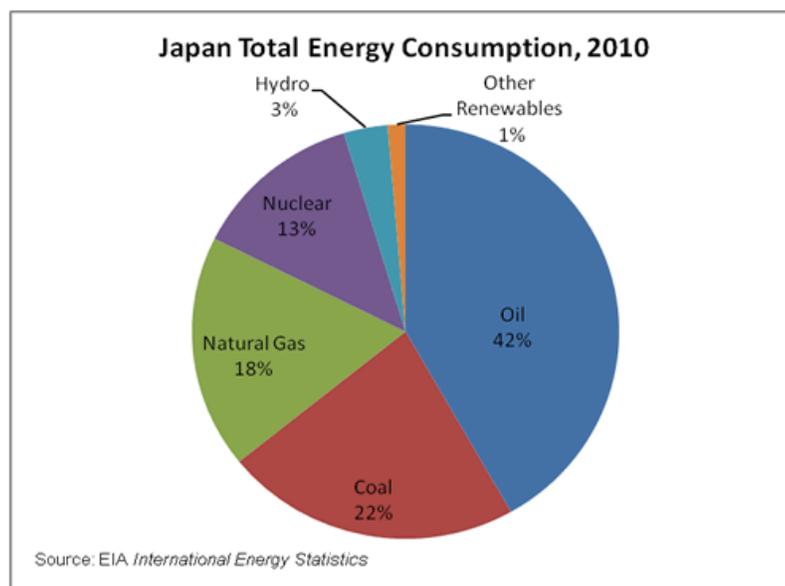
Japan is the world's largest importer of LNG, second largest importer of coal and the third largest net importer of oil.

Japan has few domestic energy resources and is only 16 percent energy self-sufficient. It is the third largest oil consumer in the world behind the United States and China and the third-largest net importer of crude oil. It is the world's largest importer of liquefied natural gas (LNG) and second largest importer of coal. In light of the country's lack of sufficient domestic hydrocarbon resources, Japanese energy companies have actively pursued participation in upstream oil and natural gas projects overseas and provide engineering, construction, financial, and project management services for energy projects around the world. Japan is one of the major exporters of energy-sector capital equipment, and has a strong energy research and development (R&D) program supported by the government, which pursues energy efficiency measures domestically in order to increase the country's energy security and reduce carbon dioxide emissions.

On March 11, 2011, a 9.0 magnitude earthquake struck off the coast of Sendai, Japan, triggering a large tsunami. The earthquake and ensuing damage resulted in an immediate shutdown of 12,000 MW of electric generating capacity at four nuclear power stations. Other energy infrastructure such as electrical grid, refineries, and gas and oil-fired power plants were also affected by the earthquake, though some of these facilities were restored. Between the 2011 earthquake and May 2012, Japan lost all of its nuclear capacity due to scheduled maintenance and the challenge facilities face in gaining government approvals to return to operation. Japan is substituting the loss of nuclear fuel for the power sector with additional natural gas, low-sulfur crude oil, and fuel oil.



In the wake of the Fukushima nuclear incident, Japan's energy fuel mix likely will change as natural gas, oil, and renewable energy take larger slices of the market share and supplant some of the nuclear fuel. Oil is the largest energy resource of fuel consumption in Japan, although its share of total energy consumption has declined from about 80 percent in the 1970s to 42 percent in 2010. Coal continues to account for a significant share of total energy consumption, although natural gas is increasingly important as a fuel source and is currently the preferred fuel-of-choice for the shortfall in nuclear capacity. Before the 2011 earthquake, Japan was the third largest consumer of nuclear power in the world, after the US and France, and nuclear power accounted for about 13 percent of total energy in 2010. Hydroelectric power and renewable energy comprise a relatively small percentage of total energy consumption in the country.



Oil

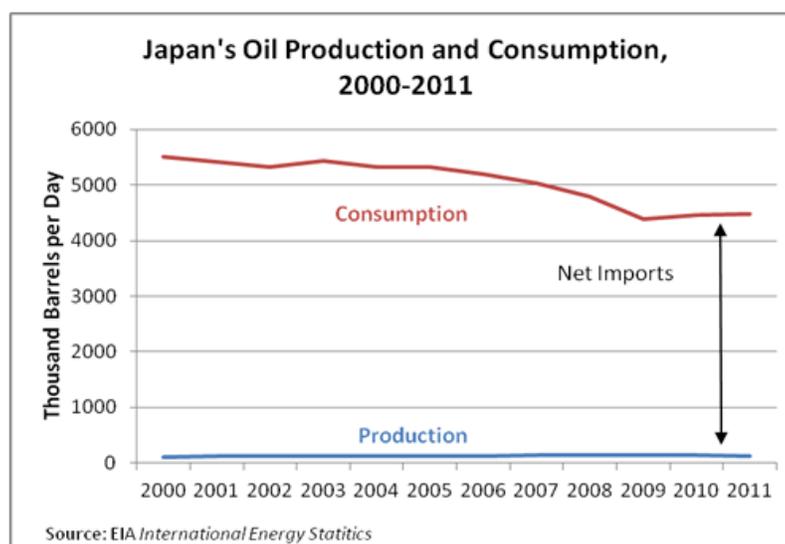
Japan relied on oil imports to meet about 42 percent of its energy needs in 2010.

Japan has very limited domestic oil reserves, amounting to 44 million barrels as of January 2012, according to the Oil and Gas Journal (OGJ), down from the 58 million barrels reported by OGJ in 2007. Japan's domestic oil reserves are concentrated primarily along the country's western coastline. Offshore areas surrounding Japan, such as the East China Sea, also contain oil and gas deposits; however, development of these zones is held up by competing territorial claims with China. While a preliminary accord was reached between the two governments in May 2008 over two fields - Chunxiao/Shirakaba and Longjing/Asunaro - in September 2010, Japan urged China to implement the agreement as tensions rose over the contested area. (See [East China Sea](#) country analysis brief.)

Consequently, Japan relies heavily on imports to meet its consumption needs. Japan maintains government-controlled oil stocks to ensure against a supply interruption. Total strategic oil stocks in Japan were 589 million barrels at the end of December 2011, with 55 percent being government stocks and 45 percent commercial stocks.

Japan consumed an estimated 4.5 million barrels per day (bbl/d) of oil in 2011, making it the third largest petroleum consumer in the world, behind the United States and China. However, oil demand in Japan has declined overall since 2000 by nearly 20 percent. This decline stems from structural factors, such as fuel substitution, an aging population, and government-mandated energy efficiency targets. In addition to the shift to natural gas in the industrial sector, fuel substitution is occurring in the residential sector as high prices have decreased demand for kerosene in home heating. Japan consumes most of its oil in the transportation and industrial sectors. Japan is also highly dependent on naphtha and low sulfur fuel oil imports. Demand for naphtha is falling as ethylene production is gradually being displaced by petrochemical production in other Asian countries. However, demand for low-sulfur fuel oil is increasing as it replaces nuclear electric power generation.

Japan's oil consumption rose slightly in 2011 by 30,000 bbl/d over 2010 due to some post-disaster reconstruction works and substitution of crude oil and low sulfur fuel oil for the suspended nuclear power after the Fukushima incident. EIA assumes that net total oil consumption will rise by another 80,000 bbl/d in 2012 if no nuclear capacity comes back online.



The Japanese government's policy has emphasized increased energy conservation and efficiency. The government generally aims to reduce the share of oil consumed in its primary energy mix as well as the share of oil used in the transportation sector. Oil as a percentage of total primary energy demand has fallen from roughly 80 percent of the energy mix in the 1970s to about 42 percent in 2010, made possible by increased energy efficiency and the expanded use of nuclear power and natural gas. Among the large developed world

economies, Japan has one of the lowest energy intensities, as high levels of investment in R&D of energy technology since the 1970s has substantially increased energy efficiency.

Sector Organization

Although Japan is a minor oil producing country, it has a robust oil sector comprised of various state-run, private, and foreign companies. Until 2004, Japan's oil sector was dominated by the Japan National Oil Corporation (JNOC), which was formed by the Japanese government in 1967 and charged with promoting oil exploration and production domestically and overseas. In 2004, JNOC's profitable business units were spun off into new companies in order to introduce greater competition into Japan's energy sector. Many of JNOC's activities were taken over by the Japan Oil, Gas and Metals National Corporation (JOGMEC), a state-run enterprise charged with aiding Japanese companies involved in exploration and production overseas and promoting commodity stockpiling domestically. New companies were formed, of which the two largest are Inpex, now Japan's largest oil and gas company, and the Japan Petroleum Exploration Company (Japex).

Private Japanese firms dominate the country's large and competitive downstream sector, as foreign companies have historically faced regulatory restrictions. But over the last several years, these regulations have been eased, which has led to increased competition in the petroleum-refining sector. Chevron, BP, Shell, and BHP Billiton are among the foreign energy companies involved in providing products and services to the Japanese market as well as being joint venture (JV) partners in many of Japan's overseas projects.

Domestic Production and Exploration

In 2011, Japan's total oil production was roughly 130,000 bbl/d, of which only 5,000 bbl/d was crude oil. The vast majority of Japan's oil production comes in the form of refinery gain, resulting from the country's large petroleum refining sector. Japan has 148 producing oil wells in over 11 fields, according to the *Oil and Gas Journal (OGJ)*.

Overseas Exploration and Production

Japanese oil companies have sought participation in exploration and production projects overseas with government backing because of the country's lack of domestic oil resources. The government's 2006 energy strategy plan encourages Japanese companies to increase energy exploration and development projects around the world to secure a stable supply of oil and natural gas. The Japan Bank for International Cooperation supports upstream companies by offering loans at favorable rates, thereby allowing Japanese companies to bid effectively for projects in key producing countries. Such financial support helps Japanese companies to purchase stakes in oil and gas fields around the world, reinforcing national supply security while guaranteeing their own financial stability. The government's goal is to import 40 percent of the country's total crude oil imports from Japanese-owned concessions by 2030, up from the current estimated 19 percent. As a result of the 2011 earthquake and greater need for energy supplies, JOGMEC plans to increase spending more than \$1.12 billion in the fiscal year 2012. This is equivalent to nearly all of the company's upstream investments since its inception in 2004.

Japan's overseas oil projects are primarily located in the Middle East and Southeast Asia. Japanese oil companies involved in exploration and production projects overseas include: Inpex, Cosmo Oil, Idemitsu Kosan Co., Japan Energy Development Corporation, Japex, Mitsubishi, Mitsui, Nippon Oil, and others. Many of these companies are involved in small-scale projects that were originally set up by JNOC. However, many are involved in high-profile upstream projects involving major investments in overseas ventures in recent years.

Some of the major upstream projects that Japanese companies are involved in overseas are:

Middle East and Africa

- Kuwait and Saudi Arabia Neutral Zone: Khafji and Hout fields - Japanese-owned Arabian Oil Company (AOC) once held a 40 percent stake in exploration for the Khafji and Hout oil fields in Kuwait and the Neutral Zone. Subsequent concession expirations have left the AOC with a limited, technical role and a 100,000 bbl/d purchase contract from Khafji field until 2023.
- United Arab Emirates (UAE): Adma Block - Japan Oil Development Co. (JODCO), a wholly-owned subsidiary of Inpex, holds a 12 percent stake in 4 fields and a 40 percent stake in a fifth field. JODCO is involved in developing the fields, which began producing in 1982. Development is continuing to maintain and expand output. Additionally, offshore UAE and Qatar, Mubarraz and 2 other fields are 100 percent owned by the consortium of Nippon Oil, Cosmo Oil, Tokyo Electric, Chubu Electric, and Kansai Electric.
- Egypt: West Bakr Block - A joint venture between Inpex and Mitsui with 100 percent interest in exploration and development. Oil production began in 1980, and the contract extends to 2020.
- Algeria: El Ouar 1 and 2 Blocks - Inpex holds a 10 percent working interest in these onshore fields containing oil, gas, and condensates.
- Congo: 11 offshore oil fields - Inpex holds a 32 percent stake. Production began in 1975, and the contract was extended to 2023.

Northern Europe

- Norway: North Sea offshore - Idemitsu Kosan currently produces 28,000 barrels of oil equivalent per day (boe/d) from its interests in five producing fields in Norway's North Sea (Snorre, Tordis/Vigdis, Statfjord East, Sygna, Fram), and was awarded two exploration licenses in September 2009 in a JV with Osaka Gas for 2 additional blocks near currently producing Snorre and Fram fields.
- UK: North Sea offshore - Idemitsu Kosan acquired Petro Summit Investment UK from Sumitomo Corporation in November 2009, and is producing 5,000 boe/d of crude and natural gas from nine fields. It is also involved in exploration and development of four licensed blocks west of the Shetland Islands. Additionally, Nippon Oil has stakes ranging from 2 percent to 45 percent in several North Sea offshore fields and currently produces about 12,600 boe/d of hydrocarbons.

Caspian Sea

- Azerbaijan: Azeri-Chirag-Guneshli Project (ACG) - Inpex has a 10 percent stake in ACG, which is now producing an estimated 1 million bbl/d.
- Kazakhstan: North Caspian Sea project, Kashagan oil field - Inpex has a 7.56 percent stake. Initial production is projected at 450,000 bbl/d at end-2014. Peak production target is 1.5 million bbl/d by the end of the decade.

Russia

- Sakhalin-1 - The Sakhalin Oil and Gas development Company (SODECO), a consortium of public and private Japanese oil companies, holds a 30 percent interest. Sakhalin-1 oil production reached 250,000 bbl/d in February 2009.
- Sakhalin-II - Mitsui and Mitsubishi have a combined interest of 22.5 percent in the oil field.

Asia

- Indonesia: Offshore Mahakam Block and Attaka unit - Inpex has a 50 percent stake in each project and production-sharing contracts lasting to 2017 with the Indonesian government. Crude and condensate are shipped mainly to oil refineries and power utilities in Japan. Additionally, Nippon Oil and JOGMEC in JV own a 17 percent stake, currently under exploration and development, in the Berau Block integrated area.
- Australia: Van Gogh and Ravensworth oil fields - Inpex has a 47.5 percent interest in Van Gogh, which started up in first quarter 2010 with a 150,000 bbl/d capacity, and a 28.5 percent interest in neighboring Ravensworth, which started up in September 2010 as part of the 96,000 bbl/d Pyrenees project. Additionally, Nippon Oil has a 25 percent stake in the NW Shelf Mutineer and Exeter fields. Its net production is currently 1,500 barrels of oil equivalent per day (boe/d), and it also has five other fields in various stages of development.
- Vietnam: Nam Rong/Doi Moi offshore oil fields - Idemitsu Kosan has a 15 percent stake in these fields, which began production February

2010 at 20,000 bbl/d; Idemitsu's portion is 1,500 bbl/d. Idemitsu, Nippon Oil and Teikoku Oil, hold interests in two other Vietnamese offshore fields currently under exploration.

- Papua New Guinea: A consortium of Nippon Oil, Mitsubishi, and the Japanese government own interests in various fields under exploration and development including onshore blocks at Kutubu and Moran.

The Americas

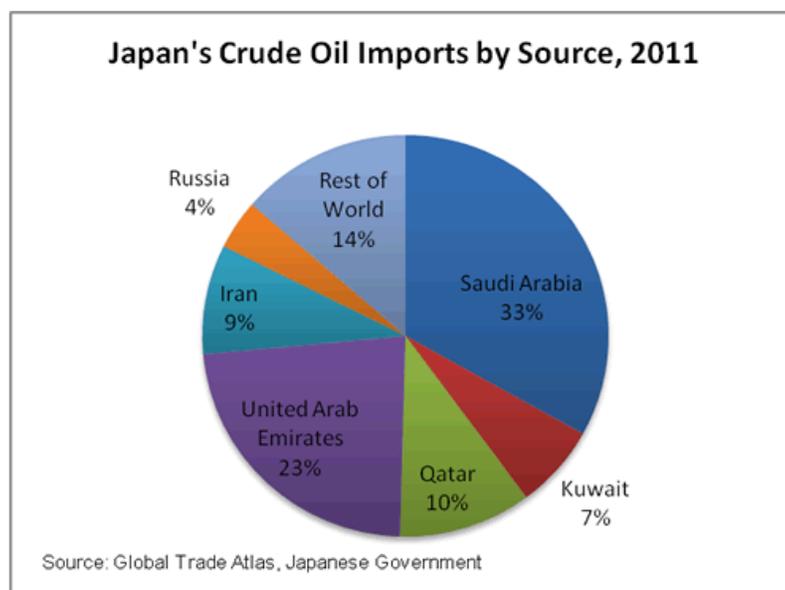
- Brazil: Frade block, Northern Campos Basin - a joint venture of Inpex, JOGMEC, and Sojitz Corp hold 18.3 percent interest in this offshore block. Production began in 2009; peak production of 79,000 bbl/d was reached in 2011.
- Canada: Alberta oil sands syncrude project - Nippon Oil has a 5 percent stake. Nippon's share was 14,000 bbl/d in 2009.
- Canada: Athabasca oil sands project, Alberta - Japex is involved in this project, its share in 2007 production was 7,000 bbl/d.

Imports

Japan was the third-largest net importer of total oil in the world after the United States and China in 2011, having imported around 4.3 million bbl/d. After the Fukushima incident, Japan has been increasing imports of crude oil for direct burn in power plants. The country is primarily dependent on the Middle East for its crude oil imports, as roughly 87 percent of Japanese crude oil imports originate from the region, up from 70 percent in the mid-1980s. Saudi Arabia is the largest source of imports, making up 33 percent of the import portfolio or about 1.1 million bbl/d of crude oil, and UAE, Qatar, and Iran are other sizeable sources of oil to Japan.

Japan reduced imports from Iran during 2011 in light of current and impending US and EU sanctions against Iran, and Japanese refiners are seeking replacements from other Middle Eastern suppliers. Japanese imports from Iran were 313,000 bbl/d in 2011, down 11.7 percent from 2010, according to the Ministry of Economy, Trade and Industry (METI).

Also, Japan is currently looking towards Russia, Southeast Asia, and Africa to geographically diversify its oil imports. As of mid-2011, Japan is substituting some of the lost nuclear fuel for power with low sulfur, heavy crudes for direct burn in power plants from sources in West Africa (Gabon) and Southeast Asia (Vietnam, Indonesia, and Malaysia).



For a consumer of its size, Japan has a relatively limited domestic pipeline transmission system. Crude oil and petroleum products are delivered to consumers mainly by coastal tankers and tank trucks, as well as railroad tankers and pipelines.

Russia's Transneft, backed by the Russian government, is building the Eastern Siberia-Pacific Ocean pipeline (ESPO), a 2,900 mile pipeline from Taishet, Siberia to Nakhodka on the Pacific Ocean, to export Russian oil to the energy hubs of the Asia-Pacific region. In September 2010, the first section of the pipeline, running from Eastern Siberia to China's northeastern frontier, was completed with a capacity of 600,000 bbl/d. The remainder of the pipeline, scheduled to be finished by 2013, is expected to transport up to 1.6 million bbl/d, about one-third of Russia's current oil exports, to China, Japan, and South Korea.

Downstream/Refining

According to *OGJ*, Japan had 4.7 million bbl/d of oil refining capacity at 30 facilities as of December 2011, and has the second-largest refining capacity in the Asia-Pacific region after China. JX Nippon is the largest oil refinery company in Japan and operates seven refineries with 1.42 million bbl/d of capacity. In recent years, the refining sector in Japan has been characterized by overcapacity since domestic petroleum product consumption has declined due to the contraction in industrial output and the decline in transportation fuel demand because of mandatory blending with ethanol. As a result, Japan scaled back refining capacity by 560,000 bbl/d between 2000 and 2010. In addition to declining domestic demand, Japanese refiners now must compete with new state-of-the-art refineries in emerging Asian markets. For example, JX Nippon aims to shut down 600,000 bbl/d of capacity between 2008 and 2015. Currently, private refiners in Japan are required to maintain petroleum product stocks equivalent to at least 70 days of consumption, which imposes large additional costs to these companies. This regulation was relaxed to 67 days after the Fukushima incident.

The Japanese government is seeking to promote operational efficiency, and in 2010, METI announced an ordinance that would raise the cracking to crude distillation capacity ratio that refiners had to meet by March 2014 from 10 percent to 13 percent or higher. This ordinance is intended to increase refinery competitiveness within the country and will likely lead to refinery closures if implemented. FACTS Global Energy anticipates that if the ordinance is implemented, it could remove an additional 600,000 to 800,000 bbl/d of refining capacity as companies rationalize their expenditures. Announced closures along with the METI legislation could lower refining capacity by a total of 1.3 million bbl/d by 2014.

The March 2011 earthquake in Northeastern Japan caused an immediate shutdown of 6 refineries with 1.4 million bbl/d or about 30 percent of the total current capacity. However, the country ramped up imports of refined products, particularly low sulfur fuel oil, in order to offset shortfalls in fuel supply for power generation until refineries were restored. In 2011, fuel oil imports surged to 102,000 bbl/d, rising from 58,000 bbl/d in 2010 while crude refining was down by 5.6 percent to 3.4 million bbl/d in 2011. As of May 2012, only 100,000 bbl/d of refining capacity remains offline from part of Cosmo Oil's Chiba refinery.

Japan relies on LNG imports for virtually all of its natural gas demand and is the world's largest LNG importer.

Natural Gas

According to *OGJ*, Japan had 738 billion cubic feet (Bcf) of proven natural gas reserves as of January 2012. Natural gas proven reserves have declined since 2007, when they measured 1.4 trillion cubic feet (Tcf). Most natural gas fields are located along the western coastline.

Sector Organization

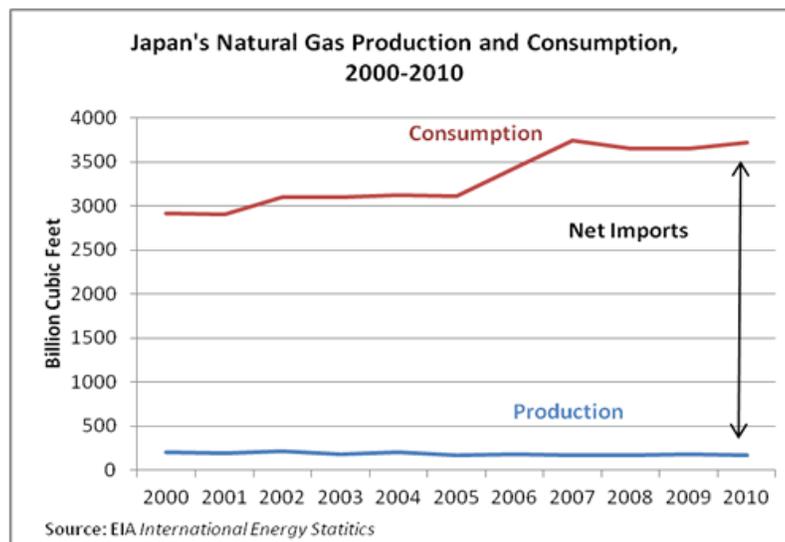
Inpex and other companies created from the former Japan National Oil Company are the primary actors in Japan's domestic natural gas sector, as in the oil sector. Inpex, Mitsubishi, Mitsui, and various other Japanese companies are actively involved in domestic as well as overseas natural gas exploration and production. Osaka Gas, Tokyo Gas, and Toho Gas are Japan's largest retail natural gas companies, with a combined share of about 75 percent of the retail market. Japanese retail gas and electric companies are participating directly in overseas upstream LNG projects to assure reliability of supply.

Although Japan is a large natural gas consumer, it has a relatively limited domestic natural gas pipeline transmission system for a consumer of its size. This is partly due to geographical constraints posed by the country's mountainous terrain, but it is also the result of previous regulations that limited investment in the sector. Reforms enacted in 1995 and 1999 helped open the sector to greater competition and a number of new private companies have entered the industry since the reforms.

Production and Exploration

Japan produced 174 Bcf of natural gas in 2010. Japan's largest natural gas field is the Minami-Nagaoka on the western coast of Honshu, which produces about 40 percent of Japan's domestic gas. Exploration and development are still ongoing at the field which Inpex discovered in 1979. The gas produced is transported via an 808-mile pipeline network that stretches across the region surrounding the Tokyo metropolitan area. Inpex is building an LNG terminal with a 73 Bcf/y capacity at Naoetsu port in Joetsu City which will connect its domestic pipeline infrastructure with its overseas assets by 2014. Japex has been involved in locating new domestic reserves in the Niigata, Akita, and Hokkaido regions of Japan, targeting structures near existing oil and gas fields.

Japanese companies are using innovative methods to produce hydrocarbons and discovered methane hydrates off the country's east coast. Japan estimates about 40 Tcf of methane hydrates may exist and hopes to begin production by 2018. The high cost of such developments could push back production plans.



Liquefied Natural Gas Imports

Because of its limited natural gas resources, Japan must rely on imports to meet its natural gas needs. Japan began importing LNG from Alaska in 1969, making it a pioneer in the global LNG trade. Due to environmental concerns, the Japanese government has encouraged natural gas consumption in the country. Japan is the world's largest LNG importer, holding about 33 percent of the global market in 2011.

In 2010, Japan consumed about 3.7 Tcf of natural gas, importing over 3.4 Tcf of LNG by tanker. As a result of the March 2011 earthquake, Japan's LNG imports rose 12 percent in 2011 to 3.8 Tcf, according to some industry sources. IHS CERA estimated that total natural gas imports increased by a monthly average of 18 percent annually from April 2011 through February 2012 compared with the pre-earthquake increases of 4 percent year-on-year between January and March 2011. LNG consumption by the electric utilities rose by 20 percent annually to a record-high of 2.4 Tcf in 2011.

Japan has 32 operating LNG import terminals with a total gas send-out capacity of 8.7 Tcf/y, well in excess of demand in order to ensure flexibility. The majority of LNG terminals is located in the main population centers of Tokyo, Osaka, and Nagoya, near major urban and manufacturing hubs, and is owned by local power companies, either alone or in partnership with gas companies. These same companies own much of Japan's LNG tanker fleet. Five new terminals are under construction and anticipated to come online by 2015 and could add between 200 to 300 Bcf/y of capacity.

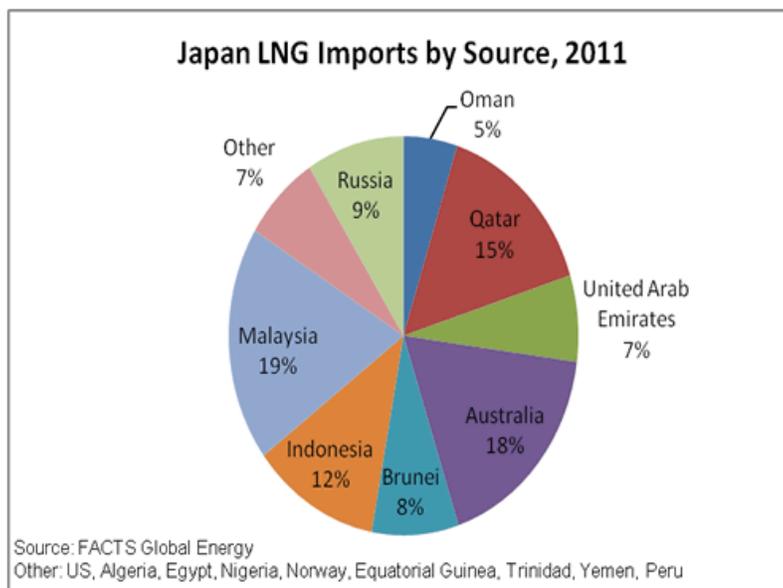
Several factors favor the use of LNG over other fossil fuels and other sources to replace nuclear energy after the 2011 earthquake. Current government carbon-abatement policies and the government's pledge to lower GHG emissions support natural gas as the cleanest fossil fuel to replace capacity. Also, gas remains cheaper than oil in contrast to the aftermath of the last major earthquake in 2007, after which fuel oil made the biggest gains from incremental demand. Destruction of coal-fired electric capacity was widespread in the area affected by the earthquake, allowing for gas to compete with coal on a cost-basis. However, Japan's higher gas demand for power and a tighter LNG global supply market over the past year has led to an overall increase in short term prices from \$9/MMBtu before the crisis to over \$16/MMBtu at the end of 2011.

After the Fukushima incident, Japan is replacing lost nuclear capacity with more short-term and spot cargo LNG which made up about 20 percent of total LNG imports in 2011. Most of Japan's LNG import infrastructure was not damaged by the earthquake since a majority of these facilities are located in the south and west of the country, away from the earthquake's epicenter. The Shinminato LNG terminal, owned by Sendai Gas, was the only plant closed in March 2011, though the facility was brought back online as of December 2011. Therefore,

Japan is able to rely on LNG as a key source of fuel after the accident. Industry analysts project LNG imports could range from 4.1 Bcf/y to 4.5 Bcf/y in 2012, depending on whether any nuclear facilities return to operation.

Most of Japan's LNG imports originate from regional suppliers in Southeast Asia, although the country has a fairly balanced portfolio with no one supplier having a market share greater than roughly 20 percent. Japan's top five gas suppliers make up 73 percent of the market share. After the March 2011 disaster, several suppliers from Qatar, Russia, Malaysia and Indonesia exported cargoes to Japan through swaps and diverted cargoes. Qatar, the world's largest supplier of flexible LNG, overtook Indonesia as the third largest supplier to Japan in 2011 and provided most of the additional imports needed after the earthquake under short-term agreements. Japanese utility companies signed agreements with QatarGas at the end of 2011 to secure longer term LNG supply.

Japan began importing LNG from Russia's Sakhalin terminal in 2009, and the two countries are discussing ways to increase gas imports to Japan via a proposed pipeline or more LNG shipments. Additional supplies to Japan could stem from other new projects in Papua New Guinea or North America in the long term. Reportedly, Japan is negotiating with US exporters for additional supply, though negotiations depend on approval of export licenses by the US and the ability of the Japanese infrastructure to accept gas that is leaner in calorific value. Japanese electric and gas companies and trading houses have signed contracts with various large LNG projects in Australia, most significantly the Chevron-led Gorgon project, which will provide up to 2 Bcf/d of LNG to Asian markets by 2014. In 2012, Mitsui and Mitsubishi purchased a 15 percent stake in Australia's Browse LNG project that will supply at least 1.6 Bcf/d of natural gas from the Browse Basin in Western Australia.



Japanese regulations permit individual utilities and natural gas distribution companies to sign LNG supply contracts with foreign sources, in addition to directly importing spot cargoes. The largest LNG supply agreements are held by Tokyo Gas, Osaka Gas, Toho Gas, Chubu Electric and TEPCO, primarily with countries in Southeast Asia and the Middle East. Many of Japan's existing LNG contracts date from the 1970s and 1980s, and are set to expire over the next decade forcing Japan to renegotiate term contracts or locate shorter term supply. Some industry analysts suggest that this is driving Japanese firms' interest in acquiring equity stakes in foreign liquefaction projects, in an effort to guarantee future supply.

The power sector is the largest consumer of LNG, holding a 66 percent market share in 2011, according to FACTS Global Energy. City gas demand makes up the remaining 34 percent of the gas market and consists primarily of industrial, residential and commercial sectors. TEPCO is the largest electric utility and gas importer, holding 44 percent of the power generation market. Tokyo Gas makes up over a third of the city gas share and is the second largest LNG importer.

Overseas Exploration and Production

Japanese companies have actively sought participation in natural gas exploration and production projects abroad. Some of the major overseas upstream projects that Japan is involved in are:

Australia

- Ichthys Project, Browse Basin, Western Australia - Inpex holds a 73-percent stake in this offshore LNG project, slated to come online in 2017. It is expected to produce 400 Bcf/y of LNG, most of which is reportedly intended for export to Japan.
- Mimia Project, Browse Basin - Inpex has a 76-percent stake. In 2008, Inpex announced that it made a new natural gas discovery in the Mimia-1 well, WA-344-P block. Total owns 24 percent. The companies are considering linking the development of the Mimia field to the adjacent Ichthys project.
- Pluto LNG Project - Tokyo Gas and Kansai Electric each acquired a 5-percent stake in Woodside's Pluto LNG project and signed a deal for 182 Bcf/y of LNG for 15 years. The first train came online in early 2012, with estimated new capacity of 200 Bcf/y of LNG.
- Timor Sea Joint Petroleum Development Area, including Bayu-Undan gas field - Inpex, Tokyo Gas, and TEPCO combined own 20 percent. An LNG sales agreement was signed for annual supply of 146 Bcf/y, and the first shipment was in 2006.
- Darwin LNG Terminal - Inpex, TEPCO, and Tokyo Gas hold a combined 20.5 percent stake in the 170 Bcf/y Darwin LNG terminal, which came online in 2006. TEPCO and Tokyo Gas have contracts totaling 146 Bcf/y for 17 years.

Russia

- Sakhalin-II - Mitsui and Mitsubishi hold stakes of 22.5 percent combined. Although Shell was originally the main operator of Sakhalin-II, in April 2007 Gazprom became the majority shareholder, and the holdings of Shell, Mitsui, and Mitsubishi were reduced to 27.5, 12.5, and 10 percent respectively. In June 2008, the Japan Bank for International Cooperation (JBIC) and a consortium of international commercial banks pledged \$5.3 billion in project financing. Sakhalin II went online in February 2009. At its peak, Sakhalin-II is expected to produce 468 Bcf/y, and approximately 60 percent of the project's LNG will be sold to Japan.
- Vladivostok LNG terminal - In July 2010, Japan and Russia signed a preliminary agreement to build an LNG terminal with liquefaction capacity of 244 Bcf/y by 2017.

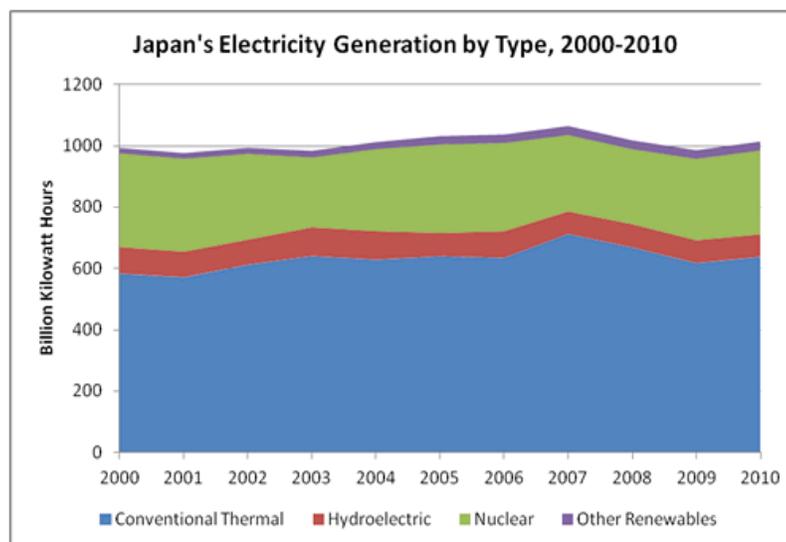
Indonesia

- Masela Block, Abadi gas field, Timor Sea - Inpex holds a 100-percent stake in this field, with an estimated 10 Tcf of natural reserves. Inpex is planning to build a floating LNG plant with a 220 Bcf/y capacity, and the project is expected to be online and shipping 150-250 Bcf/y of LNG to Japan and elsewhere by 2016.
- Senoro LNG plant, Sulawesi - Mitsubishi holds 45 percent equity. The Senoro gas field is estimated to hold 1.5 Tcf of reserves. Mitsubishi is building a 97 Bcf/y LNG plant and will be the sole buyer of LNG from the plant, scheduled to come onstream in 2014.
- Mahakam Block and Attaka Unit, Offshore Kalimantan Island - Inpex and Total each hold 50 percent equity. These fields began producing in 1972. Most of the natural gas is sent to Indonesia's Bontang liquefaction plant before being shipped to Japan. Inpex has a 20-year production contract through 2017 and is currently negotiating to extend it further.
- Berau Block, Tangguh LNG Project, Papua Province - A joint venture between Inpex and Mitsubishi has a 22.9-percent interest in the Berau Block and a 16.5-percent interest in the Tangguh Project. Reserves are estimated at 14.4 Tcf. The first cargo of LNG was shipped in July 2009. China, South Korea, and North America have long-term sales agreements for the 363 Bcf/y of production.
- North Belut gas field, South Natuna Sea - Inpex has a 35-percent interest in this project, which is led by ConocoPhillips. The field came online December 2009 at 97 Bcf/y, and the gas is shipped to Malaysia under contract.

Electricity

Japan was the world's third largest producer of nuclear power after the US and France before the Fukushima Daiichi nuclear power plant accident in March 2011.

Japan had 282 gigawatts (GW) of total installed electricity generating capacity, the third largest in the world behind the United States and China, in 2010. However, after the damage to facilities by the March 2011 earthquake, IHS Global Insight estimates capacity fell to around 243 GW in mid-2011. From the 1 Terawatt hour (TWh) of electric power that Japan generated in 2010, 63 percent of which came from conventional thermal fuels, 27 percent from nuclear sources, 7 percent from hydroelectric sources, and 3 percent from other renewable sources. According to the IEA, the share of thermal generation rose to 186 TWh or 73 percent of total generation in the first quarter of 2012, the highest on record as LNG and oil supplanted some nuclear power.



Although Japan accounts for the most electricity consumption in OECD Asia, it has one of the lowest electricity demand growth rates in the region, projected at an average of 0.7 percent from 2007 through 2018 by the Federation of Electric Power Companies of Japan. The damage to homes and industries by the earthquake and energy conservation efforts lowered power demand by 4.7 percent in 2011. In 2010, total generation was over 1 Terawatt-hour and has remained at about the same level for over a decade. Power demand could drop again in 2012 depending on how quickly reconstruction efforts unfold and if nuclear power is renewed. The fuel portfolio for power generation is expected to shift as some nuclear facilities remain permanently offline after the Fukushima disaster.

The Japanese government and electric utilities have taken several steps to ensure power supply meets demand following the Fukushima crisis. Some of these measures for thermal power stations include restoring some of the disaster-affected plants, relaxed regulations on inspections of the stations, and restarting mothballed oil-fueled stations. Also, the government promoted power restraints for consumers in the disaster-affected areas throughout 2011, invoking a 15-percent power reduction on all consumer groups. The Energy and Environment Council concluded that the government would need to request voluntary power saving efforts of 10 percent and 5 percent, respectively, from end users of Kansai Electric Power Company (KEPCO) and Kyushu Electric Power Company during the summer of 2012. Also, the government requested that four western service areas with surplus capacity to cut electricity consumption by five percent in order to transfer power to the northeastern power areas with electricity deficits.

The Japanese government, under the new Prime Minister Yoshihiko Noda, began to officially discuss the new energy policy in October of 2011, to address safety measures and the future of nuclear energy following the March 11 earthquake and tsunami and revise the Basic Energy Plan created in 2010. The 2010 Energy Plan calls for at least 12 new nuclear reactors to be constructed by 2020 and the nuclear share of the electricity sector to increase to over a 50-percent share by 2030 as the country attempts to reduce GHG emissions. However, the Fukushima catastrophe created greater public concerns and revealed potential dangers of an aggressive nuclear policy. Currently, experts on an advisory panel to the government are in disagreement over the amount of nuclear fuel mix with proposals ranging from zero to 35 percent by 2030. The revised energy policy is slated to take effect in the second half of 2012 and increase the role of LNG, oil, and renewable fuels following the government's assessment of energy security for the country's power sector.

Current policy is that nuclear power plants can be effectively used, contingent on effective regulations imposed for safety measures. It favors bringing back online some reactors suspended for maintenance, inspection and installation of safety measures in 2012, though aged reactors should be decommissioned.

Sector Organization

Japan's electricity industry is dominated by 10 privately-owned, integrated power companies that act as regional monopolies, accounting for about 85 percent of the country's total installed generating capacity. The remainder is generated by industrial facilities. The largest power company is the Tokyo Electric Power Company (TEPCO), which accounts for 27 percent of total power generation in the country. These companies also control the country's regional transmission and distribution infrastructure. Japan's electricity policies are managed by the

Agency for Natural Resources and Environment, part of METI.

Other significant operators in the electricity market are the Japan Atomic Power Company, the first Japanese company to build a nuclear reactor in 1960, which operates four nuclear power plants with 2.6 GW total and sells electricity to the local power companies, and the Electric Power Development Company (J-Power), formerly a state-owned enterprise that was privatized in 2004. J-Power operates 16 GW of hydroelectric and thermal power plants. It has also been involved in consulting services for electricity production and environmental protection in 63 countries, mainly in the developing world, since 1960.

Electricity Generation

Conventional Thermal

Japan had about 182 GW of installed conventional thermal electric generating capacity in 2009 and electricity generation was 637 TWh in 2010. According to Japan Electric Power Information Center, there are currently 61 major thermal power plants, and 6 more are under construction: 3 using LNG and 3 using coal for generation. The country's aging oil-fired power plants are used primarily as extra capacity to meet peak demand, and less than 10 percent of total electricity produced was oil-generated in 2010. Coal and natural gas comprised 25 percent and 27 percent of total power supply, respectively.

Coal, typically used as a base load source for power generation, remains an important fuel source and accounted for 43 percent of fossil fuel-fired generation in 2011, according to the International Energy Agency. Domestic coal production came to an end in 2002 and Japan imported 207 million short tons in 2010, mainly from Australia. However, new, clean coal technologies are being pursued in the power sector in efforts to meet environmental targets. As of mid-2011, Japan had 43 GW of coal-fired capacity according to IHS Global Insight. Several coal-fired plants experienced significant damage following the 2011 earthquake since they were located near Fukushima. Because of this factor, coal was not used as a substitute for nuclear power and actually experienced a negative growth in 2011.

The number of natural gas-fired power stations is increasing in Japan, and roughly 26 percent of electricity was natural gas-fired in 2010. LNG accounted for 43 percent of the fossil fuel mix in 2011, rising from 37 percent in 2010. Capacity utilization in gas-fired power facilities is close to 80 percent, so increasing LNG use in the short term is limited. The government has plans to construct more gas-fired power generators, and currently, there are three proposed gas-fired power plants with 3.4 GW of capacity scheduled to come online by 2016. The lead-time on greenfield plants is about 7 to 10 years mainly due to environmental permitting. However, TEPCO and Tohoku Electric Power, utilities that suffered damage to their gas-fired plants in the earthquake zone, were temporarily exempted from these environmental requirements.

Before the 2011 earthquake, Japanese utilities began removing oil-fired generation capacity due to higher operational costs. Unlike the more constricted capacity at gas-fired facilities, capacity utilization at oil-fired facilities is less than 50 percent. Therefore, power generators have more room to increase burn of crude oil and fuel oil than natural gas in the short term. Some utilities plan to bring back mothballed facilities to compensate for lost nuclear power. Kansai Electric Power proposed restarting 2.4 GW of power at 5 units by summer 2012. Chugoku Electric and Shikoku Electric plan to resume nearly 600 MW of power generation. Total oil-fired capacity was 60 GW, mostly crude oil direct burn, by mid-2011.

Japanese electric utilities are burning more fuel oil and direct crude to make up for lost nuclear generation. Consumption of fuel oil and crude oil in power sector were estimated at 210,000 bbl/d and 178,000 bbl/d, respectively, in 2011. Incremental demand for both fuel oil and crude oil for power ranged between 130,000 bbl/d and 145,000 bbl/d in 2011. FACTS Global Energy forecasts that these figures could increase by 19 percent for fuel oil to 252,000 bbl/d and 29 percent for crude oil to 230,000 bbl/d in 2012 assuming a few nuclear facilities are brought online. In the first quarter of 2012 as nuclear capacity dwindled to zero, monthly demand growth for fuel oil and direct crude oil burn was over 3 times higher on an annual basis. If no nuclear facilities are brought online in 2012, incremental oil demand for power could be over 250,000 bbl/d on the whole.

Nuclear

Before the Fukushima accident, Japan ranked as the third-largest nuclear power generator in the world behind the United States and France. However, the country has gradually lost all of its nuclear generation capacity as its facilities have been removed from service due to earthquake damage or for regular maintenance. General maintenance standards in Japan require facilities to come offline every 13 months for inspections. The last reactor went offline in May 2012, and for the first time in over 40 years, Japan has no nuclear generation. The average nuclear utilization rate dropped from 68 percent in 2010 to 38 percent in 2011.

Following the Fukushima accident, the Japanese government required facilities to pass two phases of stress tests issued by the Nuclear Industrial Safety Authority (NISA) as well as local government approval. As of May 2012, only two idled reactors, Ohmi No. 3 and 4, passed the stress tests and approvals by both NISA and the Nuclear Safety Commission (NSC), but the facilities must receive authorization by local government and the Prime Minister. Serious public concerns about bringing nuclear reactors back into operation may cause local governments to challenge any federal approval. Some industry sources predict Japan will resume operation of a few reactors by the end of summer 2012; however, Prime Minister Noda has delayed the approval of the facilities until stricter safety standards are drafted by the government. Several factors ranging from public safety to energy security and economic impacts contribute to the debate on re-commissioning the facilities.

Over 10 GW of nuclear capacity at the Fukushima, Onagawa, and Tokai facilities ceased operations immediately following the earthquake and tsunami, and some of the reactors are permanently damaged from emergency seawater pumping efforts and not scheduled to be brought back online. The government officially decommissioned four reactors with a capacity of 3 GW at the Fukushima Daiichi nuclear plant in April 2012. Also, Japan recently reported that it would decommission any ageing reactors older than 40 years to improve safety. Ultimately, this proposed law contributes to a long-term decline in nuclear capacity. Below is a snapshot of Japan's key nuclear facilities including those affected by the 2011 earthquake.

Japan currently has 50 nuclear reactors with a total installed generating capacity of 46 GW, down from 54 reactors with 49 GW of capacity in 2010. EIA estimates that Japan produced 274 TWh of nuclear-generated electricity in 2010. In its policy plans from 2010, the government intended to increase nuclear's share of total electricity generation from 24 percent in 2008 to 40 percent by 2017 and to 50 percent by 2030, according to the Ministry of Economy, Trade and Industry. However, the March 2011 Fukushima nuclear plant incident will likely shift Japan's focus on nuclear energy growth and affect the government's energy fuel mix targets.

Japan has a full fuel cycle setup, including enrichment and reprocessing of used fuel for recycling. Japan has promoted nuclear electricity over the years as a means of diversifying its energy sources and reducing carbon emissions, emphasizing safety and reliability. The World Nuclear Association reports there are currently two nuclear plants with 2.7 GW of capacity under construction and originally scheduled to be online by 2014. According to the Federation of Electric Power Companies in Japan, nuclear power has made a great contribution to Japan's energy security by reducing its energy imports requirement by approximately 440 MMbbl/d per year and, because nuclear energy emits no CO₂, it reduces Japan's CO₂ emissions by about 14 percent per year.



Source: Global Insight

Hydro and Other Renewables

Japan had installed hydroelectric generating capacity of 48 GW in 2009, accounting for about 16 percent of total electricity capacity. About half of this capacity is pumped storage with another 5 GW scheduled to come online by 2020. Like nuclear power, hydropower is a source for baseload generation in Japan because of the low generation costs and stable supply. Hydroelectric generation was 73 TWh in 2010, making up about 7 percent of total net generation. The Japanese government has been promoting small hydropower projects to serve local communities through subsidies and by simplifying procedures.

Wind, solar, and tidal power are being actively pursued in the country and installed capacity from these sources has increased in recent years to about 4.6 GW in 2009, up from 0.8 GW in 2004. However, they continue to account for a relatively small share of generation at this time.

As part of the revised energy policy plan, Japan is trying to encourage a greater use of renewable energy, from sources such as solar, wind, geothermal, hydropower, and biomass, for power generation. Non-nuclear renewable energy made up about 4 percent of Japan's total energy consumption and about 2 percent of the country's electricity generation in 2010. The Japanese legislature approved an act, scheduled to be official in July 2012, compelling electric utilities to purchase electricity generated by renewable fuel sources, except for nuclear, at fixed feed-in tariff prices. The costs are to be shared by government subsidies and the end users, though details of the act, particularly the tariff price, are not entirely defined.

Links

EIA Links

[EIA - Country Information on Japan](#)

U.S. Government

[CIA World Factbook](#)

[Library of Congress Country Study on Japan](#)

[U.S. Embassy in Tokyo](#)

[U.S. State Department Background Notes on Japan](#)

Foreign Government Agencies

[Japanese Agency for Natural Resources and Energy](#)

[Japanese Ministry of Economy, Trade and Industry](#)

[Japanese Ministry of Foreign Affairs](#)

Oil and Natural Gas

[Cosmo Oil](#)

[Idemitsu Kosan Co., Ltd.](#)

[Inpex Corporation](#)

[Japan Oil, Gas and Metals National Corporation \(JOGMEC\)](#)

[Japan Petroleum Exploration Co., Ltd. \(Japex\)](#)

[Mitsui Oil Exploration Co., Ltd.](#)

[Nippon Oil Corporation](#)

[Chubu Electric Power](#)

[Electric Power Development Company \(J-Power\)](#)

[Federation of Electric Power Companies \(FEPC\)](#)

[Japan Atomic Power Company \(JAPC\)](#)

[Kansai Electric Power](#)

[Nuclear Safety Commission of Japan](#)
[Tokyo Electric Power Company \(TEPCO\)](#)

Sources

Asia Pulse
BMI Asia Pacific Oil and Gas Insights
Business Monitor International
FACTS Global Energy
Federation of Electric Power Companies of Japan
Chevron Corp.
Idemitsu Kosan
IHS Global Insight
Inpex
Institute of Energy Economics , Japan
IntelAsia
International Energy Agency
International Oil Daily
Japan Atomic Power Co.
Japan Electric Power Development Co.
Japex
LNGpedia.com
Nippon Oil
Oil & Gas Journal
PFC Energy
Platts Oilgram News
Reuters
RTT News
Sakhalin Energy Corp.
TendersInfo
Upstream
U.S. Energy Information Administration
World Gas Intelligence

Contact Info

cabs@eia.gov
(202)586-8800
cabs@eia.gov

[About EIA](#) ▶ [Press Room](#) ▶ [Careers](#) ▶ [Feedback](#) ▶ [Contact Us](#) ▶

U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585



Sources & Uses

[Petroleum](#)
[Coal](#)
[Natural Gas](#)
[Renewable](#)
[Nuclear](#)
[Electricity](#)
[Consumption](#)
[Total Energy](#)

Topics

[Analysis & Projections](#)
[Environment](#)
[Markets & Finance](#)
[Today in Energy](#)

Geography

[States](#)
[Countries](#)
[Maps](#)

Tools

[A-Z Index](#)
[All Reports & Publications](#)
[EIA Survey Forms](#)

Policies

[Privacy/Security](#)
[Copyright & Reuse](#)
[Accessibility](#)

Related Sites

[U.S. Department of Energy](#)
[USA.gov](#)
[FedStats](#)

Stay Connected

[Facebook](#)
 [Twitter](#)
 [YouTube](#)
 [Email Updates](#)
 [RSS Feeds](#)

APPENDIX 32

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Finance Docket No. 30186

**TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER AND
ROSEBUD COUNTIES, MT**

**VERIFIED STATEMENT OF
WILLIAM M. ROWLANDS**

My name is William M. Rowlands. I am President of Otter Creek Coal, LLC (“Otter Creek Coal”), an operating subsidiary of Arch Coal Inc. (“Arch Coal”) and an affiliate of Ark Land Company (“Ark”). I have been an employee of several Arch Coal operating subsidiaries across the United States with duties relating to engineering, operations and management including Mingo Logan Coal Company in West Virginia, Cumberland River Coal Company in Kentucky and Virginia and Thunder Basin Coal Company in Wyoming. I am a graduate of West Virginia Institute of Technology with a B.S. degree in civil engineering.

My responsibilities at Otter Creek Coal include the day to day operation and development of the Otter Creek Mine, a greenfield coal mining project to be located in Powder River County, Montana. In that capacity, I have been responsible for developing the operation since its inception including investigation and quantification of the coal reserves, preparation of the applications for various permits related to the Otter Creek Mine including the mining permit, and interaction with the community and governmental agencies with respect to the development of the Otter Creek Mine. Based on my work experience, I am knowledgeable about the coal

reserves in Powder River County, Montana, including those in the Otter Creek area, about Ark's lease of coal tracts in Otter Creek, Montana, and about Otter Creek Coal's plans to develop the coal tracts in the Otter Creek area

I. Coal Reserves in Powder River County, Montana

The coal reserves in Powder River County, Montana making up the Otter Creek Tracts are owned in a "checkerboard" configuration by Great Northern Properties Limited Partnership ("GNP") and the State of Montana which together comprise a generally contiguous 1.5 billion ton coal reserve consisting of low sulfur, sub-bituminous coal. Construction of the Tongue River Railroad rail line will provide, for the first time, rail service to one of the largest remaining undeveloped reserves of low sulfur, sub-bituminous coal in the United States.

In November 2009, Ark leased the coal reserves in Powder River County, Montana that are owned by GNP. In March 2010, Ark leased from the State of Montana the remaining coal reserves in Powder River County, Montana. Together, the Powder River County coal reserves leased by Ark are commonly referred to as "Otter Creek Tracts." Otter Creek Coal, which as I have noted is an indirect, wholly owned subsidiary of Arch Coal and an affiliate of Ark, will develop the Otter Creek Mine and mine the coal in the Otter Creek Tracts.

II Otter Creek Coal's Plan to Develop Otter Creek Tracts

Otter Creek Coal has already sought and obtained a prospecting permit from the Montana Department of Environmental Quality ("MDEQ") for the Otter Creek area. On July 26, 2012, Otter Creek Coal filed a mine permit application with MDEQ seeking authority to construct and operate the Otter Creek Mine, a planned combination dragline/truck shovel surface coal mine that will be located in the Otter Creek Tracts near the southern end of Otter Creek Spur (Terminus Point 2) of the Tongue River rail line. The permit requests authority to develop a

mine that would cover approximately 7,600 acres in the Otter Creek area. Before the permit application can be acted upon by the MDEQ, that agency will undertake an environmental review under the Montana Environmental Protection Act. The Otter Creek Mine will transload coal to unit trains on the Tongue River Railroad via a projected rail spur/coal silo configuration located along a rail loop at Terminus Point 2 of the Tongue River rail line. The rail loop at the mine will be designed to accommodate 150-car unit trains.

Assuming that Otter Creek Coal is granted a mine permit, including all supplemental and ancillary required permits, we estimate that it will take approximately two and a half years to complete the construction of the Otter Creek Mine. Based on a myriad of factors including, without limitation, market conditions and general business considerations, our best estimate is that the Otter Creek Mine could be constructed and ready to produce coal in January 2017.

The Otter Creek Mine is expected to ramp up to its annual full production level of approximately 20 million tons of coal after two years of production. In the first year of production, we expect the Otter Creek Mine to produce a pro-rated amount of 12 million tons of coal. In the second year of production, we expect the mine to produce approximately 16 million tons of coal. Thereafter, in the third and subsequent years of operation, we expect the Otter Creek Mine to produce 20 million tons of coal annually, although actual production may vary considerably depending upon market conditions and/or other business considerations. Based upon the projected rate of production and estimated coal reserves in the planned mining area of 330 million tons, the Otter Creek Mine should allow for nearly 20 years of mineable coal production.

According to a study prepared by the University of Montana's Bureau of Business & Economic Research entitled "The Impact of Otter Creek Coal Development on the Montana

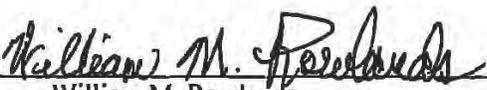
Economy," the development of Otter Creek coal and the TRRC line will bring significant economic benefits to Montana. See Appendix D to the Application. These benefits include the creation of more than 2,600 jobs during construction of the mine and railroad, and more than 1,700 new permanent jobs during operations of the mine. The jobs will not only result from direct employment by the mine and railroad, but would also be created in the retail, health care, construction, government and health care sectors, among others. The Study also concluded that the development would increase Montana personal income by more than \$100 million during construction of the mine and railroad, and by more than \$125 million per year during mine operations. The coal mine development also will generate substantial tax revenues for the State of Montana.

III. Potential Markets for Otter Creek Coal

Because the Otter Creek Mine coal will not be developed for several years pending the permitting process and other regulatory and operational hurdles, it is not possible to predict at this time where the coal will be delivered after production commences. However, there are various potential markets generally identified for the Otter Creek coal. We believe that the Otter Creek Mine project "will help [Arch] competitively serve US power producers, supply additional coal for export to emerging Asia or possibly house the site of a future coal-conversion facility." See March 18, 2010 Arch Coal press release titled "Arch Coal Secures State-Controlled Otter Creek Coal Reserves in Montana" (included as Attachment 1). In other words, the coal could move east or west for domestic use or export.

VERIFICATION

I, William M Rowlands, hereby verify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.


William M Rowlands

Dated this 13th day of December, 2012

Arch Coal Secures State-Controlled Otter Creek Coal Reserves in Montana

March 18, 2010 2:22 PM ET

ST. LOUIS, March 18, 2010 -- Arch Coal, Inc. (NYSE: ACI) today announced that it was the successful bidder for a state coal lease known as the Otter Creek Tracts located in southeastern Montana. Arch made a one-time bonus bid for the lease of \$85.8 million, payable in April 2010. The coal lease will give Arch the right to mine approximately 8,300 acres of state-owned minerals. Arch now controls approximately 1.5 billion tons of coal in Montana's Otter Creek area, including previous reserve additions such as the coal lease secured in November 2009 through Great Northern Properties Limited.

"We view the combined Otter Creek coal reserves as a strategic platform for future growth in the Northern Powder River Basin," said Steven F. Leer, Arch's chairman and chief executive officer. "The addition of the Montana state reserves further expands and strengthens our position while affording us greater flexibility in future site development. As previously stated, we believe these Northern PRB reserves will help us competitively serve U.S. power producers, supply additional coal for export to emerging Asia or possibly house the site of a future coal-conversion facility."

St. Louis-based Arch Coal is the second largest U.S. coal producer. Through its national network of mines, Arch supplies cleaner-burning, low-sulfur coal to U.S. power producers to fuel roughly 8 percent of the nation's electricity. The company also ships coal to domestic and international steel manufacturers as well as international power producers.

Forward-Looking Statements: This press release contains "forward-looking statements" - that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from changes in the demand for our coal by the domestic electric generation industry; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from operational, geological, permit, labor and weather-related factors; from fluctuations in the amount of cash we generate from operations; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a description of some of the risks and uncertainties that may affect our future results, you should see the risk factors described from time to time in the reports we file with the Securities and Exchange Commission.

APPENDIX 33

233734

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB FINANCE DOCKET NO. 30186

ENTERED
Office of Proceedings
January 28, 2013
Part of
Public Record

**TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER AND
ROSEBUD COUNTIES, MT**

**TONGUE RIVER RAILROAD COMPANY'S
REPLY TO PETITION TO REVOKE
SUPPLEMENTAL APPLICATION**

Betty Jo Christian
David H. Coburn
Linda S. Stein
STEP TOE & JOHNSON LLP
1330 Connecticut Avenue, N.W.
Washington, DC 20036
(202) 429-3000

Attorneys for Applicant
Tongue River Railroad Company, Inc.

Dated: January 28, 2013

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB FINANCE DOCKET NO. 30186

**TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER AND
ROSEBUD COUNTIES, MT**

**TONGUE RIVER RAILROAD COMPANY’S
REPLY TO PETITION TO REVOKE
SUPPLEMENTAL APPLICATION**

The Surface Transportation Board (“STB” or “Board”) should deny the Petition to Revoke Supplemental Application (hereafter “Petition”) filed on January 7, 2013 by Northern Plains Resource Council (“NPRC”) and Rocker Six Cattle Company (hereafter collectively referred to as “NPRC”). Wrongly claiming that the Supplemental Application is inadequate, NPRC’s Petition asks the STB to “revoke” Tongue River Railroad Company’s (“TRRC”) December 17, 2012 Supplemental Application to Construct and Operate a common carrier rail line between the Colstrip Subdivision of BNSF Railway Company (“BNSF”) and the Ashland/Otter Creek area (hereafter “Application”) and require that TRRC submit a “proper” application in a new proceeding.¹ The Petition cites no legal authority or precedent for the

¹ Petition at 3. NPRC’s Petition contends at page 7 that the Board “rejected” TRRC’s October 16, 2012 Application in its November 1, 2012 Decision. That is not true. The Board merely clarified its prior decision to make clear that it would review not only the environmental impacts of the TRRC proposal, but also its transportation merits. TRRC accordingly provided a fuller explanation in the December 17 Application of the public need for its proposed rail line and other information requested by the Board, while at the same time adjusting its preferred alignment based on information gathered by the time the December 17 Application was filed.

extraordinary request. There is none. In fact, the STB has already determined that the Application should be accepted and processed according to the procedural schedule applicable in this proceeding. *See Tongue River Railroad Company, Inc. – Rail Construction and Operation – in Custer, Powder River and Rosebud Counties, Mont.*, STB Docket No. 30186 (served Jan. 8, 2013).

The Petition, and the accompanying November 2012 Report of Power Consulting (hereafter “Power Report”) and verified statement of NPRC witness Mr. Gerald W. Fauth III (hereafter “Fauth V.S.”) instead raise a series of disjointed and inaccurate claims, none of which – either on its own or considered collectively – warrant the unusual relief they seek. TRRC’s Application seeks authority to construct a common carrier rail line that is designed primarily to transport coal in the Ashland/Otter Creek area to an existing BNSF rail at Colstrip and from there to market. It is clear that NPRC does not want the railroad built either on the Colstrip routing or any other. However, NPRC offers no credible reason for the Board to take the extraordinary preemptive action of revoking the Application before the Board has had a chance to assess comments on it (due March 1, 2013); TRRC’s reply to those comments (due April 15, 2013) and the Environmental Impact Statement (“EIS”) that will be prepared by the Board’s Office of Environmental Assessment (“OEA”) in satisfaction of NEPA requirements.

The Petition claims that TRRC’s Application is inadequate, incomplete and misleading primarily because it does not comport with NPRC’s contention as to where the coal will go (it asserts that virtually all of the coal will be exported to Asia) and how much will be transported (it assumes a much greater annual tonnage relative to what is presently planned to be mined.) However, TRRC’s Application accurately reports that the market for the coal will be based on market demands, that some of the coal may be exported, and that once full production is reached

20 million tons of coal will be transported from the Otter Creek mine, the only mine currently planned for the area served to the served by TRRC. Application, at 17, 20-21, 26-27, 30; *see also id.*, Verified Statement of William M. Rowlands, at 3, 4 (hereafter “Rowlands V.S.”).

Moreover, nothing in the Application precludes the STB from exploring, during the course of its environmental review, a variety of reasonable scenarios as to where the TRRC-transported coal might be destined and how much coal might be transported in the future, and assessing impacts based on those scenarios.

As TRRC will show below, the NPRC Petition is procedurally defective and substantively misguided. On these grounds, the Petition should be denied.

I. The Petition Should be Denied on Procedural Grounds

NPRC’s Petition offers no legal basis on which the Board might “revoke” an application. It also cites no procedural deficiency with the Application that TRRC filed. The Board’s January 8 Decision accepting the Application for filing underscores that there were no such deficiencies, and that the Application is sufficient to initiate the public comment portion of this proceeding and to proceed with the environmental review. No rules or precedents are cited by NPRC in support of the proposition that revocation (whatever that means in the context of an application that has already been filed and accepted) is an appropriate remedy that a party may seek when it is displeased with the contents of an application submitted under 49 U.S.C. §10901. Yet, that is precisely what NPRC is requesting.

The proper procedure for parties that have concerns about an application under section 10901 is to file comments addressed to the transportation merits (which are due under the adopted procedural schedule on March 1) and/or file comments with OEA on the scope of the

environmental review, which NPRC has already done. In fact, NPRC has filed extensive scoping comments with OEA, which included a copy of its Petition.

NPRC's Petition is, in large measure, a scoping comment masquerading as a Petition to Revoke. The Fauth Statement is explicit on this point: "I will not address the merits of TRRC's revised proposal and the STB's broad public interest standard here. *My comments focus on the STB's Draft Scope of Study and issues and impacts associated with TRRC's recent major change in the proposed preferred route set forth in*" the Application. Fauth V.S. at 3 (emphasis added). In fact, the gist of the Fauth Statement is that OEA should study the environmental impacts of the coal transportation that Mr. Fauth and NPRC posit will take place were the TRRC line constructed.

TRRC urges the Board to reject NPRC's end run around the robust opportunities that the Board has provided NPRC and others to submit their comments on the merits and the scope of the environmental review in this proceeding. Its Petition should be rejected on procedural grounds as nothing more than a poorly disguised effort to get an additional bite at the apple, beyond that allowed by the procedural schedule in this proceeding. The Petition should also be rejected because the contentions made by NPRC do not justify rejection of the Application, as we discuss next.²

II. The NPRC Petition Should be Denied Because it Lacks Substantive Merit

Replete with factual inaccuracies and mischaracterizations of TRRC's Application (examples of which are noted and corrected below), the Petition presents no arguments that

² TRRC will further respond to NPRC's points on the transportation merits of the Application in Reply Comments that are due by April 15. That time frame will allow for a fuller response to arguments raised in the NPRC Petition and to comments from other parties that may be filed by the March 1 deadline. Here, we will here briefly address the major contentions made by NPRC and its consultants.

support the unusual request to “revoke” TRRC’s Application and require a new proceeding. Because TRRC would submit and defend the same Application that it submitted on December 17, granting the relief NPRC has requested would accomplish nothing, other than the delay NPRC seeks. TRRC addresses each of the arguments raised in the Petition below and in the attached supporting verified statements of Steve Bobb, President of TRRC and BNSF Railway Company’s Executive Vice President and Chief Marketing Officer (hereafter “Bobb V.S.”) and Andrew Blumenfeld, Arch Coal, Inc.’s Vice President of Analysis and Strategy (hereafter “Blumenfeld V.S.”).

A. There is No Merit to NPRC’s Argument that the Differences Between TRRC’s Current Rail Proposal and the Rail Alternatives Studied in the Previous TRRC Proceedings Support Revocation of the Application

NPRC argues that the alignment identified now as TRRC’s preferred alignment in the Application, *i.e.* the Colstrip Alignment, is so different from the TRRC alignment approved for construction and operation by the Interstate Commerce Commission (“ICC”) in the *TRRC I* proceeding in 1986³ that it should not be considered in this docket. Petition at 8-9. The crux of NPRC’s argument seems to be that the Board will not thoroughly review the transportation merits and environmental impacts of TRRC’s proposed rail line unless the proposal is considered in a new proceeding. That premise is fundamentally incorrect. The STB has made it clear that it will conduct a full merits review and an altogether new environmental review of TRRC’s proposed rail line in this proceeding. *See Tongue River Railroad Company, Inc. – Rail Construction and Operation – in Custer, Powder River and Rosebud Counties, Mont.*, STB Docket No. 30186 at 2 (served Nov. 1, 2012) (“We make it clear here that we reopened the

³ Finance Docket No. 30186, *Tongue River R.R. – Rail Construction and Operation – In Custer, Powder River and Rosebud Counties, MT* (ICC served May 9, 1986) (hereafter “1986 Decision”).

Tongue River I proceeding to review in full what is now the entire Tongue River I line construction project. The Board's review will include not only the new environmental review of the entire construction project that will be prepared, but also an examination of the transportation merits supporting the entire Tongue River I line.") In response, TRRC submitted a new application on December 17 that sets forth, consistent with the Board's rules, the reasons why its construction and operation application should be granted under the applicable Section 10901 standard. Because the Board has reopened this proceeding and made it clear that it is undertaking a fresh look at the TRRC project, nothing (except delay) would be accomplished by initiating a new proceeding and starting over again.

NPRC claims that the geographic differences between the rail line previously approved in the TRRC I proceeding in 1986 and the rail line currently proposed by TRRC in the Application are so significant that they support NPRC's Petition to Revoke. Petition at 8-9. The rail line approved in 1986 would have been constructed between Miles City, MT and the Ashland/Otter Creek, MT area. The rail line currently proposed by TRRC, *i.e.* the Colstrip Alignment, would be constructed between the BNSF line known as the Colstrip Subdivision and Otter Creek/Ashland area.⁴ TRRC explains in its Application that it has opted for the Colstrip Alignment based on further review of its relative advantages, including its much shorter length, its operational feasibility and its apparent environmental advantages. *See* Application, at 2-4; Bobb V.S. at 2.

⁴ In multiple places, the Petition cites to what it claims is the caption in this proceeding – "Miles City to Ashland" – as support for its position that this proceeding is not the proper proceeding to analyze TRRC's current proposal. *See* Petition at 3, 8. This claim is puzzling since the caption cited in the Petition is not the caption of this proceeding. As the Board's recent decisions and TRRC's recent filings in this docket show, the caption of this proceeding is "Tongue River Railroad Company, Inc. – Rail Construction and Operation – In Custer, Power River and Rosebud Counties, MT".

What NPRC overlooks in its Petition, even though it was made clear in TRRC's Application, is that a routing via Colstrip was among the alternative alignments previously considered in the *TRRC I* proceeding. The Board notes this fact at footnote 7 in its January 8 Decision accepting TRRC's Application. A modestly different version of the alignment, known as the "Colstrip Alternative," was assessed in detail by the ICC in its Draft and Final Environmental Impact Statements ("EISs") in the original *TRRC I* proceeding and determined at that time to be among the feasible routes for the TRRC line. In addition, that Alignment was among the alignments that OEA identified prior to the December 17 Application for further review in the EIS to be prepared in this reopened proceeding, together with routings via Miles City that have been previously proposed. *See* STB Docket No. 30186, October 22, 2012 Notice of Intent to Prepare EIS and Draft Scoping Notice at 4 (providing that routes considered in TRRC I, including the Colstrip route, will be among those analyzed in the new EIS being prepared for this proceeding). A routing via Colstrip was also addressed at the public scoping meetings held by OEA in November 2012. *See* http://www.tonguerivereis.com/enviro_review.html (displaying map used at scoping meetings).

Because a rail line between Colstrip and the Otter Creek/Ashland area was previously analyzed by the ICC in the original *TRRC I* proceeding and the OEA previously stated its intent to analyze such a routing as an alternative in this reopened proceeding, TRRC's choice of that routing as its preferred alignment should come as no surprise to NPRC. The Board therefore should reject NPRC's argument that somehow TRRC's choice requires that this proceeding be

restarted.⁵ In fact, the Miles City alignments have not been removed from consideration in this proceeding and will be assessed as part of the NEPA process.

In addition, there will be ample opportunity for the public (including NPRC) to address the merits of the Colstrip routing during the EIS process and on the merits side of the case, including in comments due on March 1. For example, to the extent that Mr. Fauth may wish to argue that there are disadvantages to the Colstrip route such as engineering issues noted in the ICC's 1986 Final EIS in TRRC I, which he cites at page 13 of his Statement, he is free to do so. Likewise, TRRC will have an opportunity to show on reply that locomotive technology advances over the last several decades render outdated and irrelevant any concerns that somehow the Colstrip route is not feasible for an operational perspective. *Bobb V.S.* at 2. Likewise, if NPRC or others wish to point out environmental disadvantages to the Colstrip route versus other possible routings for the TRRC line, they are free to do so – although the absence of any such criticism in NPRC's Petition is notable.

B. NPRC's Contentions About the Destination for the Coal to be Transported By TRRC Do Not Warrant Revocation of the Application or a New Proceeding

NPRC also argues that a new proceeding is needed because the purpose of the line has "fundamentally changed" -- in the original TRRC I proceeding most of the coal transported by

⁵ NPRC grossly mischaracterizes the Application in this section of its Petition claiming that "Despite these profound geographic differences between the 1986 and 2012 rail lines, TRR informs the STB that the new proposal is '[N]o different that [*sic*] railroad approved in 1986.'" Petition at 8-9. In fact, a review of the full sentence in the Application that NPRC only partially quotes shows that the sentence was not addressing the route of the TRRC rail line. Rather, TRRC was explaining that the primary purpose of the TRRC rail line remains the same now as it did in the 1980s, which is true. The full sentence in the Application reads "The primary purpose of the TRRC rail line now proposed -- to facilitate the transportation of substantial coal resources that otherwise have no viable transportation alternatives -- is no different than the rail line approved for construction and operation by the Interstate Commerce Commission ("ICC"), the Board's predecessor, in the TRRC I proceeding in 1986." Application at 2. This is a fully accurate statement.

TRRC was predicted to move east to domestic electric utilities in the Upper Midwest, whereas now, according to NPRC, most of the coal transported by TRRC will be moving west to West Coast export facilities. Petition at 9-12. Putting aside NPRC's much too confident assessment as to the destination of the coal (this will be addressed below), what NPRC conveniently overlooks is that in terms of the public need for the TRRC line to transport coal from the Ashland/Otter Creek area to the national rail network, there is no difference at all between an alignment for the TRRC line via Colstrip versus an alignment via Miles City. The Colstrip Alignment will facilitate the transportation of the same coal that would be transported were the line to be built through Miles City, as originally proposed. And there is no meaningful mileage penalty for eastbound traffic using the Colstrip routing. *See* Bobb V.S. at 3; Blumenfeld V.S. at 3. Thus, the purpose to be served by the TRRC proposal has not changed by virtue of TRRC's preference for the Colstrip Alignment. For this additional reason, NPRC has failed to show that a new proceeding is warranted.

While NPRC argues that the Application is inaccurate or misleading in failing to acknowledge that the ultimate destination of the coal is one or more West Coast export facilities, it does not contend that there is no public need for the line. In fact, it claims that the TRRC line will transport even more coal than TRRC's prediction of what will be transported in the reasonably foreseeable future. Petition at 13-15. Thus, it is important to note that NPRC does not challenge that there is a demand for the transportation that TRRC proposes to provide on its rail line. (NPRC's current position on this issue is, interestingly, a complete turnaround from its prior position that there is no market for Ashland and Otter Creek coal and thus no public need. *See Tongue River Railroad Company, Inc. – Construction and Operation – Western Alignment*, STB Finance Docket No. 30186 (Sub-No. 3) (served Oct. 9, 2007) (hereafter "*TRRC III*")

Decision”) at 16-19 (rejecting NPRC’s claims that Ashland area mines “may not develop” due to distance from markets and higher demand for Wyoming coal, and further rejecting claims that the sodium content of the coal will reduce its marketability)).

In short, whether there is a robust market for the coal that the TRRC line will transport in Asia (as NPRC now insists) or whether the coal may be used in a combination of domestic and export markets (which TRRC submits is more likely), is not particularly relevant in terms of the transportation merits of the proposal. TRRC and NPRC now both agree that there will be a public demand for the Otter Creek and Ashland area coal. The public need element of Section 10901 is thus not in dispute.

Further, NPRC cites no statutory or other requirement that the Board determine with certainty, for purposes of assessing the merits of a rail construction application, where the product carried by the applicant railroad will be transported. The Board neither regulates where rail cargo moves nor assesses the adequacy of rail construction applications based on whether it is more likely that cargo will move to point A rather than Point B. Thus, the focus of the Power Report and Mr. Fauth on where the coal will move (they claim that virtually all of it will move westbound for export to Asia) offers no basis for challenging the adequacy of the Application or initiating a new proceeding. Again, they do not challenge the proposition that there is a market for the coal.

For environmental review purposes, including downstream impacts on air quality and other resources, the Board may certainly make reasonable assessments as to where the rail traffic leaving the TRRC line might go. While the Application makes clear that TRRC is not in a position to know exactly what amount of traffic will move east versus west once it leaves the TRRC line, TRRC has no objection to OEA assessing reasonable alternative scenarios as to

where the coal traffic may flow in its EIS. Given OEA's ability to do so, one is left to wonder what NPRC is concerned about.

Moreover, NPRC's contention that virtually all of the TRRC-transported coal will move westbound on BNSF lines to the Pacific Northwest (PNW) for export is open to serious question. TRRC's Application correctly recognizes that the coal market is dynamic and that the export market for coal mined in many different areas of the country is growing based on market demand overseas. The Application thus notes in several places that TRRC coal could be exported and could (as is the case for most Montana coal) be used for domestic power generation or for coal conversion projects. *See* Application at 20, 26-27; and attached Exhibit D at 2, Rowlands V.S. at 4. What percentage is exported and what percentage is used domestically will, as the Application states, be dictated by the market forces that are in play at the time (several years from now) when the Otter Creek mine and the railroad are fully permitted and become operational following development/construction. Between now and the time that the first shipment of coal moves over the TRRC line, factors such as the price of natural gas, the capacity of export facilities, and the availability of new technologies for using coal could have a significant bearing on the market for Otter Creek/Ashland coal. *See* Blumenfeld V.S. at 2-4. Thus, NPRC's exaggerated contention that virtually the only market for Ashland/Otter Creek coal is the export market is simply overblown, just as was NPRC's argument a few years ago in the *TRRC III* proceeding that there is no market at all for that coal.

There are additional reasons to doubt NPRC's certainty regarding the destination of the coal. As Mr. Blumenfeld notes, the PNW export facilities in Washington and Oregon that NPRC and its witnesses are so certain will be the destination for the TRRC shipments are (a) not yet built, (b) not yet even permitted by federal or state authorities and (c) face opposition from

various groups. Blumenfeld V.S. at 3-4. As Mr. Fauth repeatedly notes, the large coal export facilities at Longview and Cherry Point are merely “proposed.” Petition, Fauth V.S. at 17-18. In this setting, it is plainly inappropriate to conclude, as NPRC, the Power Report and Mr. Fauth much too readily do, that the Application is deficient or should be rejected for its failure to state that all or most of the coal transported by the TRRC will end up at one or more of these proposed export facilities.⁶ Further, to the extent it is exported, Ashland/Otter Creek coal could be exported through the Great Lakes, such as through the facility at Superior, WI, which is now attracting Montana coal en route to Europe. Blumenfeld V.S. at 4; Bobb V.S. at 4.

Montana coal is primarily used in domestic markets and not exported. Blumenfeld V.S. at 2-3. Otter Creek coal is expected by Arch to fare well in the competitive domestic market because of the low cost to extract that coal relative to other mines. Blumenfeld V.S. at 3. Mr. Blumenfeld thus notes that major customers could include Detroit Edison and Minnesota Power which have facilities in the Upper Midwest and might choose to use the Otter Creek coal in lieu of coal from other PRB sources. *Id.* at 3. In addition, the expert reports prepared for the State of Montana in connection with its decision to lease the Otter Creek tracts did not assume that most of the coal would be exported, but rather contemplated domestic use.⁷

⁶ At least one other export facility originally planned for the PNW has not proceeded forward to the permitting stage. See <http://www.bloomberg.com/news/2012-08-15/railamerica-shelves-plans-to-export-coal-from-washington-1-.html> Further, although any predictions of the future are somewhat uncertain, it bears note that Montana’s former Governor (who supported the lease of the Otter Creek tracts during his recently-ended tenure) has recently predicted that none of these facilities will be built. See <http://www.snl.com/InteractiveX/Article.aspx?cdid=A-16755419-12584>.

⁷ Notably, those reports also assigned a significant value to the Otter Creek coal. See Norwest Otter Creek Property Summary Report, Volume I of II, at pages 4-1 through 4-5 (July 12, 2006) (identifying domestic plants as the target market for Otter Creek coal without mention of coal export), available at

Nonetheless, as noted above, the Application quite accurately states in several places that coal transported on the TRRC line not only could be used domestically, but also could be exported. In fact, TRRC cites at page 21 of its Application a national policy favoring more exports, making the point that the export of coal is not only a possibility, but would serve the national interest.

In short, there was no misrepresentation in TRRC's Application regarding the ultimate destination of the Otter Creek coal that will be transported by the TRRC rail line, and no basis to revoke the Application.

C. TRRC's Coal Tonnage Estimates Were Based on Reasonable Assumptions and Do Not Support TRRC's Petition to Revoke

NPRC also argues, incorrectly, that TRRC purposely understated the coal tonnages that will be transported by the proposed rail line in order to avoid having certain environmental analyses conducted in this proceeding. Petition at 13-16. The contention is as inaccurate as it is offensive.

The volume of coal available for transportation predicted in the Application (20 million annual tons at full production) was very clearly based on an estimate of production at the Otter Creek mine, the only mine currently proposed in the Ashland/Otter Creek area. It bears note that the 20 million annual ton projection used in the Application is actually considerably higher than the 12.3 million annual ton projection used in the *TRRC III* proceeding for the Ashland area production. *See* Verified Statement of Mark T. Morey at Total Tonnage Forecast Table.

<http://dnrc.mt.gov/Trust/MMB/OtterCreek/3Evaluations/NorwestStudy2006/NorwestVol1.pdf>;
Montana Otter Creek State Coal Valuation (January 30, 2009)
<http://dnrc.mt.gov/Trust/MMB/OtterCreek/Default.asp> (providing a substantial valuation for the coal available to be mined at Otter Creek).

submitted with TRRC's May 1, 2003 Supplemental Evidence in *TRRC III*. Thus, NPRC's contention that TRRC has understated volumes is not correct.

TRRC of course does not take issue with the fact that there is additional coal that is available for mining and transport in the area, and in fact TRRC makes this clear in its Application. *See* Application at 29, and attached Exhibit D, at 1. However, TRRC does not agree that its Application was somehow deficient or misleading for failing to quantify how much additional coal it might transport given the absence of any specific proposals to develop mines other than Otter Creek and thus the absence of any definitive basis on which to make such estimates. In fact, the Northern Cheyenne Tribe, which NPRC identifies as one source of additional coal traffic for the TRRC line (*see* Petition at 13) has told the Board in a scoping filing in this proceeding that it does not intend to exploit its coal resources⁸, and no entity has publicly stated that it has any current plans to develop the prior Montco Mine site in Ashland. *See* Bobb V.S. at 4; Blumenfeld V.S. at 5.

Moreover, Mr. Fauth's assumption at pages 17, 22-24 of his Statement that there could be 48.5 million tons/year of coal transported on the TRRC line is unsupported. He apparently derives that figure from a study done in connection with the proposed Longview export facility, but offers no evidence that all or any of that predicted export tonnage would originate on TRRC's lines. Further, at page 22 he cites the November 8, 1996 *TRRC II* decision for the proposition that the long ago proposed Montco mine near Ashland might have an annual

⁸ *See* Northern Cheyenne Tribe Administration Scoping Comments, Document # EI-19850, at Appendix A, pg. 2-28 (January 9, 2013) ("The Tribe has been under tremendous pressure to develop its vast fossilized energy resources to address its impoverished conditions. *In spite of this, the Tribe has chosen not to exploit these resources due to the uncertainties of potential impacts to the environmental and cultural integrity of its homelands and its people.*") (emphasis added).

production capacity of 38 million tons.⁹ However, a closer inspection of the Draft EIS in *TRRC II* on which that decision is based indicates that it was assumed at the time that Ashland/Otter Creek area mines might collectively produce up to 18 million tons annually, a figure *lower* than the 20 million tons that Arch now predicts it can extract from Otter Creek. See Table 1-2 at page 1-8 of the *TRRC II* Draft EIS and discussion at 1-7 through 1-9, attached as Exhibit A.¹⁰ Further, as noted, there are no pending proposals at this time to develop the Montco mine.

At the same time, TRRC recognizes that for purposes of environmental review, OEA may wish, for example, to utilize different estimates of what could be transported via the TRRC line in order to explore the impacts of different potential coal production scenarios. Precisely that was done by the ICC in its 1985 EIS in this proceeding. See *Tongue River Railroad Company, Inc. – Rail Construction and Operation – In Custer, Power River and Rosebud Counties, Mont.*, Docket No. 30186, Final EIS served Aug. 23, 1985, at 41, Table 3-1 (positing low, medium and high estimates of coal production). Mr. Fauth correctly notes at page 20 of his Statement that a similar analysis was undertaken in the DM&E proceeding, where impacts associated with assumed production at 20, 50 and 100 million tons were assessed. TRRC does not object to a similar exercise here for NEPA purposes.

Finally, NPRC suggests that TRRC somehow cooked the numbers in order to come in below an 8 train/day threshold that it claims could preclude an environmental assessment of

⁹ See Finance Docket No. 30186 (Sub No. 2), *Tongue River Railroad Company – Rail Construction and Operation – Ashland to Decker, MT* (“*TRRC I*”) (Decision served November 8, 1996) at 14. That same decision refers at page 31 to an estimate of “an additional 5 to 10 million tons projected to move over the new line with the opening of the Montco and other Tongue River Valley coal mines.”

¹⁰ See *TRRC II*, Draft EIS (served July 17, 1992) (the reference in Table 1-2 to “Near Mines” refers to the mines that would be served by the *TRRC I* line as is made clear from the text at page 1-9, which discusses the projected tonnage growth from 8 to 18 million tons produced from those mines).

downstream impacts. Petition at 13-15. This claim is far-fetched. The determination of the number of trains per day that could move on the line in the reasonably foreseeable future was based on a simple mathematical calculation that takes into account the tonnage to be moved and the tonnage typically transported via a unit train. That calculation is as follows: 20,000,000 tons/year divided by (125 cars/train times 120 tons/ car times 365 days/year) = 3.65 trains/day. See *Bobb V.S.* at 5.

The threshold to which NPRC alludes is found in the Board's regulations at 49 CFR 1105.7(e)(5), which governs when more detailed air quality analyses are required to be included in an Environmental Report prepared by an applicant. Here, TRRC did not prepare such a report, but rather the Board is preparing an EIS using the services of a third party contractor. The 8 train/day regulation does not in any way limit the Board's ability to study air quality or other downstream impacts as appropriate in such a Board-prepared EIS. Moreover, as noted above, TRRC does not object to reasonable assumptions based on potential future Ashland mine development of a higher level of future train traffic on its lines for purposes of NEPA review.

D. BNSF's Role in the TRRC Rail Project

In addition, NPRC claims that the role of BNSF has changed in the TRRC project between 1986 and today. See Petition at 12. However, the Petition does not explain why BNSF's role supports a revocation of the Application, and plainly it does not.

The Petition in fact overstates the change in BNSF's role in the TRRC project. BNSF has long had a role in that project. In TRRC's 1998 application seeking authority to construct and operate the Western Alignment in the *TRRC III* proceeding,¹¹ TRRC explained that BNSF

¹¹ TRRC Application for Construction and Operation Authority in Finance Docket No. 30186 (Sub-No. 3), *Tongue River Railroad Company, Inc. – Construction and Operations – Western Alignment* (filed April 27, 1998).

might be the operator of the rail line and included a general plan for operations assuming BNSF would be the operator. Four BNSF employees (Gregory Swienton, Larry Parker, Thomas Kraemer, David Mahle) submitted verified statements in support of TRRC's 1998 application. The Board's October 9, 2007 Decision in *TRRC III* likewise makes clear that BNSF was providing monetary and staff support for the TRRC proposal and that BNSF might operate the TRRC line. *TRRC III* Decision, at 12 ("With respect to the concerns about BNSF's role and involvement, the record clearly shows that BNSF has been providing monetary and staff support for this project, and that TRRC and BNSF have been discussing a potential arrangement whereby BNSF would operate over the Decker to Miles City line"). Moreover, the only rail carrier that the TRRC rail line was going to connect to in the original TRRC I proceeding and today is BNSF. The Board did not find these facts problematic in 2007, and they provide no support for a request to "revoke" the Application and require a new one.

NPRC correctly points out that BNSF is now an owner of the TRRC and that BNSF executives hold two of four officer positions at TRRC. However, BNSF obviously does not hold all of the officer positions (Arch Coal holds one of the remaining two) and is not the only company with an ownership interest in TRRC's parent, but is just one of three entities with such an ownership interest. *See* Application at 12-13. Again, none of these facts are problematic, and none would change if a new application were filed.

NPRC also argues that capital improvements or upgrades to BNSF lines west of the point of interchange with the TRRC line must be part of this proceeding. *Fauth* at 19-26. That argument is tied to its unsupported contention that all or virtually all of the coal will definitely be transported to the proposed export facilities in Washington. It is also based on the faulty premise that improvements announced by BNSF are related to the TRRC project. *See Bobb V.S.* at 3-4.

In any event, any improvements or upgrades to BNSF lines are not part of TRRC's Application and are not subject to the Board's jurisdiction. The extent to which traffic moving on BNSF lines might be assessed as part of the NEPA review in this proceeding is a matter appropriately addressed by OEA in the scoping process, not in a Petition to Revoke.¹²

E. Contrary to NPRC's Claim, TRRC Fully Complied with the STB Regulations Relating to the Preparation of an Environmental Report

NPRC argues that the STB should revoke the Application because TRRC's environmental report is deficient and does not comply with the STB regulations. *See* Petition at 16-18 (citing 49 CFR § 1105.7(a)). Again, NPRC is flat wrong. The STB's regulations waive the requirement to submit an environmental report with an application where OEA works with a third party consultant under OEA's supervision. *See* 49 CFR 1105.10(d). Indeed, the regulations encourage the use of third-party consultants. *Id.* As explained in the Application at 32, a third-party consultant has been retained in this proceeding and, as a result, the requirement to submit an environmental report that would otherwise apply has been waived. 49 CFR § 1105.10(d).

¹² Mr. Fauth points to the DM&E proceeding to argue that Board needs to take into account the impacts on downstream rail lines. Fauth V.S. at 6-7. The extent of any downstream impact assessment is a question properly addressed in the scoping process.

CONCLUSION

For the reasons stated herein, NPRC's Petition to Revoke is entirely without merit. The Board should deny it.

Respectfully submitted,



Betty Jo Christian
David H. Coburn
Linda S. Stein
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, N.W.
Washington, DC 20036
(202) 429-3000

Attorneys for Applicant
Tongue River Railroad Company, Inc.

Dated: January 28, 2013

APPENDIX 34



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

January 23, 2013

David H. Coburn
Steptoe & Johnson LLP
1330 Connecticut Avenue, NW
Washington, DC 20036

Re: Docket No. FD 30186, Tongue River Railroad Company, Inc.—Rail Construction and Operation—in Custer, Powder River and Rosebud Counties, Mont.; Information Request #1

Dear Mr. Coburn:

We have reviewed the filings submitted by Tongue River Railroad Company, Inc. (TRRC) dated October 16, 2012 and December 17, 2012 in connection with the above-referenced proceeding. Consistent with 40 C.F.R. § 1506.5(a), we request the following information to assist the Office of Environmental Analysis (OEA) in conducting the environmental review in this case:

1. The December 17, 2012 supplemental application (“Supplemental Application”) states that coal from the Otter Creek mine could move east or west for domestic use or export, including export to Asia. *See* Rowlands VS at 4. Please provide more specific information about the potential market locations for the coal that would be transported from the mines identified in the Supplemental Application via the Tongue River Railroad. If TRRC does not have this information, OEA requests a detailed explanation of why this information cannot be supplied.
2. The Supplemental Application states that Otter Creek coal may find markets overseas through U.S. ports along the Atlantic, Pacific, Great Lakes or Gulf Coasts. *See* Supplemental Application at 20. Please provide information about any potential plans to transport Otter Creek coal through U.S. ports in these locations.
3. Please provide any information about potential shippers with whom Arch Coal has negotiated or signed contracts to ship Powder River Basin (PRB) coal from the Northern PRB on the Tongue River Railroad.

4. Please provide justification for construction and operation of the Montco Mine spur to Terminus Point #1 (including information about the Montco mine itself and other mines in the vicinity that might potentially be served by the spur in the future).
5. The Supplemental Application states that 3.7 trains per day would travel on the Tongue River Railroad. Because this number represents the average number of trains per day, please provide the maximum number of trains per day that could potentially travel on the Tongue River Railroad in the reasonably foreseeable future if the line is approved and constructed.

Please provide the above-requested information at your earliest convenience, but no later than February 5, 2013, to Mr. Ken Blodgett of my staff at 395 E Street, SW, Washington, DC, 20423, 202-245-0305 (e-mail address: Kenneth.Blodgett@stb.dot.gov) and to Mr. Alan Summerville of ICF International, our independent third-party contractor, at 9300 Lee Highway, Fairfax, Virginia, 22031, 703-934-3616 (e-mail address: Alan.Summerville@icfi.com). Please feel free to contact me or Mr. Blodgett if you have any questions. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Rutson". The signature is written in a cursive, flowing style.

Victoria Rutson
Director
Office of Environmental Analysis

APPENDIX 35

BEFORE THE
INTERSTATE COMMERCE COMMISSION

FINANCE DOCKET

TONGUE RIVER RAILROAD COMPANY;
CONSTRUCTION AND OPERATION
OF AN ADDITIONAL RAIL LINE FROM ASHLAND TO DECKER, MONTANA

FINANCE DOCKET NO. 30186 (Sub-No. 2)

VERIFIED STATEMENT OF

ROGER McDANIEL

David M. Schwartz
Robert L. Calhoun
Sullivan and Worcester
1025 Connecticut Ave. NW
Washington, D.C. 20036
(202) 775-8190

Thomas E. Ebzery
Village Center 1
1500 Poly Drive
Billings, Montana 59102
(406) 245-4881

W. H. Bellingham
Moulton, Bellingham, Longo &
Mather, P.C.
200 Securities Building
P.O. Box 2545
Billings, Montana 59103
(406) 248-7731

Attorneys for Applicant
Tongue River Railroad Company

Due Date: April 29, 1992

BEFORE THE
INTERSTATE COMMERCE COMMISSION

FINANCE DOCKET No. 30186
TONGUE RIVER RAILROAD COMPANY --
CONSTRUCTION AND OPERATION
FINANCE DOCKET No. 30186 (Sub-No. 2)
TONGUE RIVER RAILROAD COMPANY --
ISSUANCE OF SECURITIES

VERIFIED STATEMENT OF
ROGER McDANIEL

My name is Roger McDaniel. I am a Senior Vice President in the Utility/Project Finance Group of the Lehman Brothers Division of Shearson Lehman Brothers Inc. ("Lehman Brothers"). My business address is American Express Tower, World Financial Center, New York, New York 10285. I have been employed by Lehman Brothers since 1983, and my experience in project financing includes transactions involving construction and permanent debt, leveraged leasing, limited partnerships and other financial structures for over \$4.5 billion in projects including conventional and alternative energy power plants, natural resources, transportation, waste disposal, privatization and other projects.

I received my Bachelor of Arts degree in Philosophy in 1966 from Stanford University. In 1978, I received my J.D. from the New York University School of Law. Before joining Lehman Brothers, I worked as an attorney with Cleary, Gottlieb, Steen & Hamilton in New York.

HISTORY AND EXPERIENCE OF LEHMAN BROTHERS

Lehman Brothers has provided financial advisory services to a wide variety of clients and industries since its inception in 1850. In particular, Lehman Brothers has been and continues to be active in the financing of railroads and railroad companies. Kuhn, Loeb & Co., one of the predecessors of today's Lehman Brothers, was also instrumental in financing the railroad boom in the second half of the nineteenth century. The Firm helped raise funds for numerous railroads including the Chicago and Northwestern in 1877, followed by the Pennsylvania Railroad and the Chicago, Milwaukee and St. Paul Railroad in 1881.

Today, Lehman Brothers advises numerous clients in the transportation industry. Since 1980, the Firm has managed or co-managed more than 30 public offerings for transportation companies, totalling over \$5 billion. In 1989, the Firm arranged the initial public offering of the common shares of Illinois Central Corporation and Lehman Brothers' merchant banking partnerships currently hold 10 million of its common shares. The Firm has also acted as a financial advisor for a number of transcontinental and regional railroads.

Overall, Lehman Brothers ranked third among investment banks in underwriting volume for publicly-issued debt and equity securities in the U.S. in 1991. In private placements, it has consistently been ranked among the top six of over 100 firms surveyed annually by Investment Dealer's Digest.

In project financings, Lehman Brothers was one of the first investment banks to arrange non-recourse and limited recourse financings for large capital projects. It continues to be leader in the industry. The Firm has served as investment banker to over 50 projects with capital requirements exceeding \$25 billion in the past four years. Some of the more prominent transportation projects include the following: In 1986 Lehman Brothers advised a consortium of companies from Japan, China, Hong Kong and the United Kingdom on the financing of a US\$ 360 million road and rail tunnel from Hong Kong to Kowloon; in 1989 it arranged the financing for the first major privatization in Thailand, a US\$ 1.1 billion expressway in Bangkok; it acted as an advisor in the \$1.1 billion construction of the second leg of the Transgabon Railway in Gabon; and in 1986 it advised Kumagai Gumi Co., Ltd. in connection with the construction of the \$540 million Sydney Harbor Tunnel in Australia.

In addition to its activities in the transportation industry, Lehman Brothers is very active in arranging project financings for a broad range of clients, including independent power, alternative energy, natural resources, communications and infrastructure projects. Recent examples of such project include the \$108 million Getchell gold mine developed by FirstMiss Gold in Nevada; the \$654 million leveraged lease financing of the Vidalia Hydroelectric Project developed by Catalyst Energy Corporation and Dominion Capital, Inc; the \$296 million American REF-FUEL waste-to-energy project developed in New York; the \$264 million Ogden Corporation waste-to-energy project developed in Lawrence and Haverhill, Massachusetts; a fiberoptic telecommunications network for LDX Group; and a number of other independent power, cogeneration, resource recovery and hydroelectric projects.

FINANCING PLAN

Lehman Brothers' role in connection with the application to the Interstate Commerce Commission (the "Commission") filed on June 28, 1991 (the "Application") by the Tongue River Railroad Company ("TRRC") has been to assist TRRC's management in devising a financing plan for the construction and operation of the proposed Tongue River Railroad (the "TRR"). Lehman Brothers served a similar function in connection with TRRC's 1984 application to the Commission with regard to the approval of the initial 89 miles of the TRR from Miles City, Montana to two terminal points near Ashland, Montana, and my colleague Roger H. Goodspeed testified on behalf of TRRC in support of the application eventually approved by the Commission at that time.

The proposed financing plan for TRRC amends and supplements the plan described in Mr. Goodspeed's testimony in 1984. This plan, which was developed by a team at Lehman Brothers under my direct supervision, complements the efforts of Corporate Strategies, Inc. ("CSI"), which prepared extensive financial and operating feasibility studies based on information provided to them by Mission Engineering and V.H. Wood Associates. It has been our responsibility to evaluate the financial feasibility of the TRR, including the 42-mile extension that is the subject of the Application. Thus we reviewed CSI's assumptions, including projected tonnages, income statements, balance sheets and cash flow statements. Our suggestions regarding assumptions were incorporated into the Application. Based upon our knowledge of the financial markets, and subject to completion of the contractual arrangements for the TRR, we believe that the structure described below is a sound plan for financing the project.

Extensive discussions about viable economic alternatives with TRRC's management have led to the selection of a financing structure in which lenders will have recourse solely to the assets and revenues of the TRR. This type of financing is commonly referred to as "project" financing. Lenders in project financings will evaluate the projected revenues and expenses of a project in establishing its debt capacity. In this regard, the relative certainty associated with the revenues and expenses is of particular importance, and often project financings use long-term purchase contracts for the output of the project. In the absence of contractual commitments, lenders will use expert consultant studies to establish reasonable forecasted levels of revenues and expenses. Financings of this type generally take the form of a construction loan for the construction phase of the project and a term loan for the operation phase.

Financing Structure

The ultimate financing structure will include a substantial equity commitment from the partners in TRRC as well as third-party debt. The final debt-equity ratio, which in the Application was projected to be 65-35, will depend upon a number of factors, including market conditions and the specific credit structure arranged for the project. The debt, which is expected to be privately placed, will bear competitive market rates of interest and have various maturities available in the market at the time of issuance. The specific structure will include a credit facility provided by a syndicate of commercial banks and/or institutional lenders which will consist of a construction loan with a term equal to the construction period and a commitment, from the construction lender or another institution, to provide a term loan of at least 15 years upon completion. During construction, the interest payable on the construction loan will be added to the principal amount of the loan. The principal will be amortized in accordance with a schedule that

achieves certain average loan life targets and reflects the projected pattern of cash flow generated by TRR. Commercial bank lenders would generally be repaid over the first 15 years after completion and institutional lenders up to 25 years.

Credit Structure

In developing a credit structure that would support a project financing, we have focused on the various elements of the project that lenders will look to for assurance that project risks have been dealt with. For example, the form of the construction contract is designed to deal with most of the completion risks involved with large projects. Although the specific form of construction contract for the TRR has not been finalized, non-recourse project financings most often employ "turnkey" contracts, in which a contractor undertakes to deliver a completed project for a fixed price and on a guaranteed date of completion. The contract would be supported by a performance bond, and liquidated damages would be payable for delayed completion. As mentioned above, the amount of debt that can be raised for the TRR is also dependent on the level of certainty associated with the project's revenue stream. Approaches that can be useful in this regard include long-term take-or-pay contracts with utilities or coal producers, assignment to TRRC of a portion of the haul from existing contracts, and trackage rights agreements.

Under a typical trackage rights agreement, another carrier using the TRR track (the "User") would pay TRRC a specific charge per car or car-mile for use of the TRR lines. The User would utilize its own crews, motive power and, in some cases, coal cars to operate over TRR lines, while the TRRC would continue to be responsible for its own movements. A trackage rights agreement might call for an annual minimum usage or a reservation charge that would entitle the User to send a specified number of cars per year.

Such an agreement would enhance the financeability of the project, although the ultimate credit structure for the TRR will depend on the precise arrangements agreed to by the parties. Procedures involving any trackage rights agreement would be subject to the regulations of the Commission.

ASSUMPTIONS RELATED TO FINANCING PLAN

Lehman Brothers is in the market daily, staying current with the rate and maturity preferences of lenders, the favored types of securities and trends regarding credit standards. In particular, our assumptions and estimates as to maturities and amortization are generally based on our assessment of the market and the securities being offered (including the availability of certain credit ratings), upon our analysis of similar transactions which were completed in comparable markets and upon informal discussions with potential lenders. The security provided to potential lenders to TRRC will include but not be limited to a mortgage on the assets of the TRRC, the assignment of all contracts of TRRC, including any contracts with utilities and any trackage rights agreement, and a pledge of revenues of the TRR. It is our belief that depending on the market conditions at the time of issuance, financing the Tongue River Railroad would be an attractive investment opportunity for commercial and institutional lenders.

CONCLUSION

In conclusion, two points from Roger Goodspeed's 1984 Verified Statement should be reiterated. First, market conditions can vary from day to day. Therefore, the actual financing structure, interest rates, maturities and sources of funds will depend on the market conditions in effect at the time the financings are arranged. Second, it should be understood that Lehman Brothers has been retained solely as TRRC's financial advisor. We have not been retained or requested, at this point, to act as underwriter or otherwise with respect to the placement of the securities which TRRC proposes to issue.

State of New York)

County of New York) ss.

Roger McDaniel, being duly sworn, deposes and says that he has read the foregoing statement and knows it to be true to be best of his knowledge and belief.

Signed Roger McDaniel

Subscribed and sworn to before me this 24 day of April, 1992

YVONNE THOMAS
Notary Public, State of New York
No. 24-4902440
Qualified in Kings County
Commission Expires August 3, 1993

Yvonne Thomas

My Commission Expires: August 3, 1993

APPENDIX 36

BEFORE THE
INTERSTATE COMMERCE COMMISSION

Finance Docket No. 30186 (Sub-No.2)

TONGUE RIVER RAILROAD COMPANY --
CONSTRUCTION AND OPERATION
OF AN ADDITIONAL RAIL LINE FROM ASHLAND TO DECKER, MONTANA

VERIFIED STATEMENT OF

VINCENT J. deSOSTOA

My name is Vincent J. deSostoa. I have been retained by Corporate Strategies Inc. (CSI) as a consultant for all financial studies conducted for the Tongue River Railroad Company (TRRC). I am Senior Vice President of OMI Corp. I was previously a principal in the organization and planning department of Peat, Marwick, Mitchell & Co. (PMM & Co.). My business address is 90 Park Avenue, New York City, New York 10016. Prior to joining OMI Corporation, I was employed by PMM & Co. since 1972 as an auditor and then as an management consultant in which capacity I conducted studies in the following areas: financial feasibility, cost and rate analysis, economic analysis, marketing, and strategic planning.

In 1971, I received a Bachelor of Science degree in Accounting from Ohio University and in 1972 I received a Masters degree in Business Administration with a concentration in finance from Xavier University. I joined PMM & Co. on the audit staff and was responsible for the audit of commercial, financial and transportation clients.

While a principal at PMM & Co., I was responsible for the original financial feasibility studies of the TRRC rail line Miles City to two terminal points south of Ashland, Montana. Because of my previous association with the project I was retained to form a study team with CSI.

OVERVIEW OF THE STUDY TEAM

The CSI team was retained by the TRRC in August 1989 to study the feasibility of adding an additional 41 miles to the previously permitted rail line (submitted as Finance Docket 30186, Sub. No. 1). We were involved in evaluating the proposed new alignment as well as in looking at the total project consisting of the previously permitted line and the Extension. The latter rail line will connect with the Burlington Northern Railroad (BN) near Decker, Montana.

Specifically, the study team was retained to develop economic, financial, construction, and operating plans for the proposed railroad, including forecasts of projected expenses, revenues, net income, and various financing scenarios. Included in this process was the examination of alternatives associated with construction of the proposed Extension, working in close cooperation with marketing consultants, investment bankers, construction engineers, and environmental consultants and advisors associated with the project.

The TRRC's operations on the proposed Extension and its connection with the (BN) required the CSI study team to prepare a new operating plan. New developments in train operations such as the introduction of voice dispatching techniques and the use of Track Warrants, also suggested changes to the Operating Plan proposed for the original TRRC rail line. The proposed Tongue River Railroad during the initial years would tend to be more of a "bridge" carrier than an originating carrier.

The CSI study team first obtained engineering data for the 41-mile Extension from the studies conducted for TRRC by Mission

Engineering, Inc. of Billings, Montana (Mission) and verified by Parsons, Brinckerhoff, Quade and Douglas, Inc. of Reston, Virginia (Parsons). Mission and Parsons also developed new revised construction costs. These costs and the timing of the expenditures were incorporated into the CSI study team's operating, financial, and economic plans. The construction costs used in our study are discussed in the Verified Statement of Daniel Hadley.

Using information from the engineering team, marketing (traffic) data from Victor H. Wood and Associates, and other sources, the CSI study team developed a proposed operating plan for the railroad. Because of the connection with the BN both at Decker and Miles City, it was deemed prudent to review the operating plan with operations and operations planning departments of the BN for technical feasibility. The operating plan is more fully described later in this testimony. The operating plan was used to develop estimates of operating costs for the railroad.

Finally, the study team developed a proposed capital structure and schedule of fixed charges associated with the debt financing and equity placement of the project. The debt financing and equity placement of the project was developed in cooperation with TRRC and its financial advisors, Lehman Brothers. Details of the railroad's capital structure and schedules of fixed charges are set forth in TRRC's Extension Application filed June 28, 1991, in Finance Docket No. 30186 (Sub. No. 2).

Based on the foregoing information I directly managed the preparation of projected financial statements for the railroad, including a pro forma income statement, balance sheet, and statement of cash flows. Those forecasts are presented in TRRC's Application as Exhibits E and F.

NEW CONSTRUCTION COSTS

Mission Engineering, Inc. conducted an engineering study and a cost analysis to construct the 41 mile Extension of the Tongue River Railroad from Terminus Point 1 to a connection with the coal mines at Spring Creek and Decker and to connect with BN. Costs to build the previously permitted line from Miles City to Terminus Point 1 were updated and included revisions of a new connecting point with BN west of Miles City. The work of Mission Engineering was subsequently reviewed by the Parsons engineering firm in November of 1990.

The construction costs that are described in Exhibit G to the Application are the best estimates available at this time, representing the combined opinions of the two engineering firms. Capital outlays are estimated to be approximately \$70 million in Year 1, \$80 million in Year 2, and \$83 million in Year 3, totaling approximately \$233 million for the three year construction program. These figures do not include construction financing costs that are capitalized.

OPERATING PLAN

The Tongue River Railroad is designed as a single-track railroad running from Miles City, Montana to Ashland, Montana and onto the Spring Creek/Decker areas in southeastern Montana, a distance of nearly 121 miles.

The line begins just west of Miles City at approximately BN milepost 80. A small terminal is planned to be constructed south of Interstate 94, which will be built to hold and process arriving or departing trains.

Traffic Projection Studies developed for TRRC provide, in its first year of operation, for the transport of an estimated 19 million tons of coal, which represents 32 round trips per week, or an average of 4.6 trips per day. In the year 2000, an estimated 27 million tons of coal will be moved by the TRRC, requir-

ing 45 round trips per week, or an average of 6.4 trips per day. By the year 2005, this number is expected to rise to 31 million tons of coal, requiring 52 round trips per week, or an average of 7.4 trips per day.

Rail Design Specifications

The railroad will be constructed with 136 lb. continuous welded rail. Initial design specifications for the Extension include the construction of two passing sidings each approximately 8,500 feet long. This will provide for capacity to meet TRRC's needs for a number of years. In addition to passing tracks, additional set-out tracks will be constructed for set-out and storage of maintenance-of-way (MOW) equipment, bad-order cars, etc.

Signals and Communications

Signal System: The railroad will be dispatched and operated under a Track Warrant Control System. Under this system, train control signals will be located only in advance of the facing points of main line power or spring switches. At each end of the railroad, where it connects with the BN line, a home signal, controlled by the BN dispatcher will indicate that it is safe to proceed onto the BN main line. At Miles City, it will also indicate that the switch to the BN is aligned for a movement from the Tongue River Railroad. Similarly, home signals located on the BN will indicate that it is safe to proceed onto the Tongue River Railroad, and at Miles City, that the power switch is aligned for the Tongue River Railroad.

Communication System: The communication system will consist of two radio frequency channels as assigned by the FCC in an application to be submitted prior to start up of operations. Repeater stations (signal boosters) will be located as appropriate to assure continuous communications with train crews with no signal loss under the worst of environmental conditions. Repeater stations may be located every 10 to 20 miles, or less in some

areas. All other communications will be via commercial or leased telephone lines.

One frequency will be assigned strictly to train operations and track maintenance personnel. Another channel will be assigned for non-operating related uses.

Locomotives will have radios capable of communicating on TRRC's assigned frequency. Backup radios will be those installed on trailing locomotive units included in each train consist. The conductor on each train will also be provided with a hand-held portable radio for local communication when the conductor is not in the lead cab of the locomotive.

Employees

Transporting 16-19 million tons of coal a year when operations begin will require a staff of 57-64 people. Supervision of the railroad will be under the jurisdiction of a general manager and two trainmasters/road foremen of engines. All three people will share supervision of operating employees, covering for each other on vacation, personal days, holidays, weekends, etc. Additional operating supervision will be added at a later time if the need develops.

Maintenance-of-Way employees will consist of one foreman, two diesel mechanics (who will also service MOW equipment), two electricians, one welder, and one mechanic-helper, in addition to five carmen/inspectors. A signal maintainer/communication technician for maintenance-of-railway crossing signals and communications hardware will also be necessary.

Maintenance-of-Way (MOW) facilities will be maintained at Miles City and staffed by a foreman, two machine operators, and two helpers. A supporting MOW facility in Ashland will include a section foreman and a section gang of 3-4 people.

Two track inspectors will be sufficient for the railroad during the early years and initial traffic levels. A third and fourth inspector, as well as a third section gang, will be added as traffic increases.

Finally, a headquarters, or administration, staff of 7 people, not counting the general manager, will be required to handle accounts payable, accounts receivable, payroll, purchasing, inventory management, revenue accounting, and car accounting. Preparation of checks and payroll accounting, revenue accounting and car accounting will largely be contracted out.

Rolling Stock Requirements and Source

Rolling stock owned or leased by the TRRC will be limited primarily to work equipment and medium power locomotives. Rebuilt 4-axle, lower-horsepower locomotives should be adequate for this purpose. Approximately fifteen ballast cars, two or three flat cars, and ten or twelve box cars will be sufficient to handle company material. The coal trains will be 112-125 car trains powered by three six-axle, 3,000 horsepower locomotives.

Equipment and Facilities Needed

The TRRC is proposing to construct new facilities near the BN tracks southwest of Miles City. Terminal facilities will include facilities for train and engine crews, headquarters operation, limited TRRC equipment servicing and maintenance, and maintenance-of-way activities.

The TRRC will require about 9 train crews (18 employees) for traffic levels of 16-19 million tons of coal per year. This will increase to 10 train crews (20 employees) when the coal levels reach 21 million tons per year. Crews will increase as tonnage rises.

As currently planned, only one carman/inspector will be on duty around the clock, for inspections to insure safe operations on the Tongue River Railroad.

The majority of the freight cars used by the TRRC will be owned by shippers, by receivers, or by other railroads. The TRRC will provide sufficient open-top hoppers or high-side gondolas to replace those cars that are "bad-ordered" or seriously damaged. These cars will be purchased or leased from major freight car

manufacturers, and they will be included in the freight car purchase made by the party supplying cars to the coal mines.

There will be minimal switching at the Miles City terminal. With adequate space, the TRRC's Miles City terminal will be ideal as a place to inspect and switch out for maintenance and repair, in conjunction with PLM's private car repair facility in Miles City. Empty private coal cars will be inspected thoroughly, marked for repair or preventative maintenance, and switched in and out of empty trains for maintenance as close as possible to the point of loading.

The main office area will provide space for the general manager, the office manager and clerical forces. The business and accounting functions such as payroll, billing, collection, and preparation of reports will also be located in this building.

Maintenance-of-Way

To operate safely at 50 MPH, the main TRRC line will be maintained to Class IV standards. In the early years of operation, a minimum program of MOW will be required and for the first five to ten years, some program maintenance will be contracted out.

Ashland is the proposed location for headquartering an additional section gang and a signal maintainer. The railroad will be constructed of new materials and initially will require a minimum amount of maintenance. Surfacing is the anticipated exception. Settlement of the newly constructed railroad can be expected because of the type of traffic to be handled (104 ton coal cars) and spot surfacing will be required during the first year of operation. Spot surfacing can be performed by contract or by a section gang. This gang would consist of a foreman and two machine operators.

Safety, Experience, and Record of Operator

The volume of traffic (traffic density), size of trains, and operating speeds require that the TRRC develop and implement a safety program for all employees consistent with the highest standards of Class I railroads. In addition to an on-going inspection and maintenance program to ensure safety of equipment, track, and structures, a formal training and safety indoctrination program will be developed for employees.

The TRRC's staff, who will supervise and control operation, will consist of experienced and knowledgeable operating personnel with extensive railroad experience. During the design-and-construction phase, the TRRC will develop and implement a comprehensive safety program for all its employees. This safety program will include, but not be limited to, several elements:

- ° an operating rule book that follows contemporary procedures used by Class I railroads, but modified as appropriate to meet specific TRRC operating requirements;
- ° a book of safety, radio, and general rules;
- ° a book of air brake and train handling rules;
- ° a safety training program and the maintenance of accurate personnel records reflecting training and testing in all of the above rules;
- ° a program for continual surprise safety tests (testing operating personnel; simulated emergency or unsafe conditions);
 - a plan for periodic re-training and testing;
 - a plan for periodic physical examinations;
 - disciplinary procedures and guidelines for rule infractions.

Employees failing to pass the above-listed examinations will be prohibited from working in railroad operations.

The TRRC will adopt the latest edition of The Consolidated Code of Operating Rules before beginning its operations. In

addition, rules governing equipment operation and handling will be adopted. The TRRC will hold operating-rules classes for all new operating personnel and for supervisors. All operating personnel and supervisors will be expected to pass a required operating examination and an equipment handling examination. Periodic equipment operation and equipment handling classes and examinations will also be established.

The TRRC also anticipates the purchase of time on a train-performance simulator (TPS). This simulator would be used to develop a train-handling plan and to instruct the main operating supervisory personnel in the safe handling of empty and loaded coal trains. Training of train and equipment crews will be accomplished both by on-the-job training and formalized instructions on a TPS.

The TRRC will develop an operating timetable and special instructions that would be used to govern the movement of trains on the rail line, the time and location of temporary slow orders, and other conditions that may affect the movement of trains. Because of the climate in which the railroad operates, there will be additional special instructions governing operations in severe cold and snow conditions. All new employees will be instructed in the meaning and the application of the timetable and the special instructions.

Periodic examinations will be required of all personnel to determine the employee's knowledge of the instructions. Employees failing to pass these examinations will be prohibited from working in railroad operations.

The Pattern of Service

The pattern of service proposed in this modified operating plan differs from the originally approved proposal in that the initial service of the amended proposal will be to operating mines at Spring Creek and East and West Decker. As the proposed Montco and Tongue River Valley coal mines are developed, the pattern of service will accommodate their transportation needs as

well. As additional mines open, new service patterns will be developed to ensure that all mines are adequately served. However, the railroad operation will not vary from the basis of the standard unit-train, commencing from Miles City to the mines sites and then returning to Miles City.

Contingencies

TRRC's management will make contingency plans for problems that might occur. While unable to justify the cost of purchasing standby emergency equipment, TRRC will have arrangements with owners of heavy duty cranes and other re-railing equipment and will know the approximate amount of time necessary for such equipment to reach a site. Emergency procedures will be planned in advance for derailments, heavy snowfall, major washouts and other disasters that cannot be handled solely by TRRC's equipment. TRRC will also provide state police, local fire departments, and other emergency response teams with maps and knowledge of access points prior to the start-up of the railroad.

FINANCIAL MODEL AND INPUTS

The primary analytic tool utilized in the analysis and in the preparation of the financial statements was the Short Line Planner[®] developed by CSI specifically for studies of this nature. This computerized economic and operations planning mode has been utilized in 60 proposed and existing regional and short line railroads. The commercial version of CSI's model is one of the most complex financial planning tools available for short lines, regional railroad planners and analysts. The CSI model is designed to help potential and existing operators make more informed decisions regarding financial planning, investments, operations, and marketing strategies. The model is based upon substantial experience and evolved over a period of eight years.

The power and utility of the model allowed the study team to use and examine many operating alternatives and assumptions in a

variety of economic environments. The model is sensitive to management decision-making, material prices, and even locomotive fuel consumption rates. Items such as operating statistics and traffic volumes, rates of specific traffic movement, inflation and many other factors contribute to the overall flexibility of the model. A significant feature of this model is its ability to be adapted to highly complex situations such as the proposed project and to test the different assumptions regarding employment, equipment, service levels, and capital structures after ascertaining the most efficient operating and financing network.

The financial model is driven by series of inputs, divided into the following categories:

- Traffic projections;
- Revenue assumptions per carload;
- Operating and maintenance equipment plan;
- Operating, maintenance, marketing, and management staffing plans;
- Maintenance plans;
- Transportation plan;
- General administrative cost factors;
- Debt structure and loan amortization plan;
- Equity structure by year;
- Other balance sheet items; and
- Tax factors.

Results of Operations

Exhibit F to the TRRC's Application represents the forecast profit and loss for each of the initial 10 years of operation. It includes details for revenue and summarizes information for operating expenses, net railway operating income before interest expenses and income taxes, as well as net income before income taxes.

The Operating Plan envisions receiving coal traffic at the Decker and Spring Creek Mines near Decker, Montana with haulage along the TRRC route and delivery at Miles City. Additional

traffic will originate at Montco and other proposed mines located near Ashland, Montana. The growth in revenue is projected to increase from an anticipated \$34.2 million in the first year to approximately \$74.9 million in Year 10. While there may be limited future revenues from terminated traffic and income from demurrage, property rents, interest, and other miscellaneous items, no provision for the receipt of this income was made in the financial models. Income in any of these areas will only improve the viability of the project.

Also in current year dollars, total operating expenses are estimated to be approximately \$18.3 million in Year 1 and rising to \$33.2 million in Year 10, primarily as a result of increased operations of the carrier. Maintenance-of-way represents the largest group of expenses, accounting for over 73 percent of the total operating costs in the first year. These expenses are abnormally high, attributable solely to depreciation, which by itself represents almost 99 percent of the total maintenance-of-way expenses. Cash outlays for track maintenance are projected at \$4,800 per mile in the first year as the railroad is new and obviously little maintenance will be required. Most maintenance activity will be related to maintaining the surface conditions of the track, as the coal traffic causes the ballast and subgrade to settle and stabilize.

Marketing and sales expenses are expected to be nominal in the early years because the railroad will have a few large customers. Originating Wyoming and Decker/Spring coal is currently being hauled under contract rates between BN and the affected utilities.

Transportation will be the largest item of cash operating expense, amounting to \$7.1 million in the first year and increasing to \$15.4 million by Year 10. The largest single item of transportation expense will be fuel, projected to be \$3.9 million in Year 1 and growing to \$8.4 million in Year 10.

Direct labor and fringe costs for enginemen and trainmen will amount to approximately \$778,000 in Year 1 growing to \$1.7

million in Year 10. Train supplies and expenses are budgeted at \$134,000 per year in Year 1 and rising to \$286,000 in Year 10.

General Administrative (G & A) expenses are largely independent of traffic levels and are more established by management decision. In the analysis I have assigned what is assumed to be the appropriate level of G & A for the specific operations of the railroad. They are estimated at \$1.3 million in Year 1 and \$2.1 million in Year 10. Other expenses include car-hire, but only for BN owned cars, since shipper furnished cars typically move under contract provisions which explicitly exclude car-hire payments. Car-hire is budgeted at \$2.4 million in Year 1, growing to \$5.3 million by Year 10. Property taxes have been estimated and are consistent with current Montana tax statutes and regulations. The final item of expense is contingency which is budgeted at 9 percent of total cash outlays for expenses enumerated above.

Included in the above economic forecast is inflation for cash expenses and revenues. Four percent was used for both. Depreciation, amortization, and debt repayment were not inflated.

V. De Sostoa

Vincent J. DeSostoa

STATE OF NEW YORK)

)

ss:

COUNTY OF KING)

Vincent J. DeSostoa being first duly sworn, deposes and says he has read the foregoing statement, knows the contents thereof, and that same are true and correct as stated.

Vincent J. DeSostoa

SUBSCRIBED AND SWORN TO before me this 24th day of April, 1992.

SEAL

Frank Citera
Notary Public for the State of New York.
Residing at 6612 GRAND CENTRAL PLAZA
My commission expires JUNE 30, 1993
H.L.S.
N.Y.

FRANK CITERA
Notary Public, State of New York
No. 24-0642312
Qualified in Queens County
Commission Expires June 30, 1993

APPENDIX 37

Arch Coal, Inc. Reports Fourth Quarter and Full Year 2012 Results

Bolstered cash and liquidity position to \$1.4 billion as of Dec. 31, 2012
 Western Bituminous Region delivered record operating performance last year
 Expects metallurgical sales volume growth in 2013 versus 2012



Press Release: Arch Coal, Inc. – Tue, Feb 5, 2013 7:45 AM EST

ST. LOUIS, Feb. 5, 2013 /PRNewswire/ --

Earnings Highlights				
<i>In \$ millions, except per share data</i>	Quarter Ended		Year Ended	
	12/31/12	12/31/11	12/31/12	12/31/11
Revenues	\$968.2	\$1,228.8	\$4,159.0	\$4,285.9
Income (Loss) from Operations	(282.6)	139.7	(681.6)	413.6
Net Income (Loss) ¹	(295.4)	70.9	(684.0)	141.7
Diluted EPS (LPS)	(1.39)	0.33	(3.24)	0.74
Adjusted Net Income (Loss) ^{1,2}	(88.7)	61.5	(76.7)	205.2
Adjusted Diluted EPS (LPS) ²	(0.42)	0.29	(0.36)	1.07
Adjusted EBITDA ²	\$71.2	\$270.4	\$688.5	\$921.1

1/- Net income attributable to ACI.

2/- Defined and reconciled under "Reconciliation of non-GAAP measures" in the release.

Arch Coal, Inc. (ACI) today reported a net loss of \$295 million, or \$1.39 per diluted share, for the fourth quarter of 2012. Excluding acquired sales contract amortization, goodwill and intangible asset impairment charges, other non-operating expenses and the related tax impacts of these items, Arch's fourth quarter 2012 adjusted net loss was \$89 million, or \$0.42 per diluted share. In the fourth quarter of 2011, Arch reported adjusted net income of \$62 million, or \$0.29 per diluted share.

(Logo: <http://photos.prnewswire.com/prnh/20120727/CG47668LOGO>)

Revenues totaled \$968 million and adjusted earnings before interest, taxes, depreciation and amortization ("EBITDA") was \$71 million for the three months ended Dec. 31, 2012. Excluding a one-time \$58 million charge related to a customer contract obligation, fourth quarter 2012 adjusted EBITDA would have been \$130 million.

"Arch continued to successfully execute its operational strategy and made progress on a number of fronts in the fourth quarter while weathering challenging coal market conditions," said John W. Eaves, Arch's president and chief executive officer. "Our Western Bituminous Region delivered a record cash margin performance, and our other regions generated positive cash flow even while running at significantly reduced volume levels. In addition, we shipped 3 million tons overseas in the fourth quarter, capping a record year for company exports."

Annual Highlights

For full year 2012, Arch reported an adjusted net loss of \$77 million, or \$0.36 per share. Revenues totaled \$4.2 billion on coal sales of 141 million tons in 2012 compared with \$4.3 billion in revenues on coal sales of 155 million tons in the prior year. Adjusted EBITDA was \$688 million in 2012 versus \$921 million in 2011.

"Arch achieved several notable milestones while managing through a tough 2012," said Eaves. "First, we delivered another strong performance in our core values of employee safety and environmental stewardship. Second, the company's exports rose to a record 13.6 million tons in 2012, demonstrating its growing presence in the seaborne coal trade. Third, we further improved our operational efficiency through the consolidation of operations, strong cost control at active operations and significant reductions in capital spending. Lastly, we further bolstered our liquidity to \$1.4 billion, positioning Arch to weather near-term market headwinds and emerge from this cycle as an even stronger producer."

"Looking ahead, we are seeing signs that a coal market rebound is possible in the second half of 2013," added Eaves. "At Arch, we are running our operations in a manner that will enable us to capitalize on the rebound as it occurs. We are proactively responding to increased interest for Western Bituminous coal after several years of weakness. We are also making progress in realigning our asset portfolio in Appalachia – and expect our competitive position to be further enhanced as the Leer longwall starts up in the third quarter of 2013. In the Powder River Basin, we are continuing to focus on controlling costs as we manage our operations at significantly reduced production levels."

Financial Items

In the fourth quarter of 2012, Arch recorded a non-cash impairment charge of \$231 million related to the company's goodwill and intangible assets, primarily due to the decline in benchmark metallurgical coal prices versus 2011. These charges have no impact on Arch's liquidity and cash flow from operations and do not impact the company's ongoing business operations. Arch also recorded a \$58 million charge in the fourth quarter to reflect the rejection of a customer supply contract by the U.S. Bankruptcy Court and the assumption of the contract obligation by Arch. Accordingly, Arch accrued for the full present value of the contract in 2012.

Also in the fourth quarter, Arch issued a \$375 million senior unsecured note and an incremental \$250 million secured term loan. The company also maintains borrowing capacity under a \$350 million revolving credit facility and a \$250 million asset securitization program. As of Dec. 31, 2012, Arch had total available liquidity of \$1.4 billion, of which \$1.0 billion was in cash and short-term interest-bearing securities. Debt outstanding at the end of 2012, net of cash and investments, totaled \$4.1 billion, and the company's net debt-to-capital ratio was 59 percent.

"Arch proactively completed several financing initiatives last year that fortified our cash position, relaxed restrictive financial covenants until late 2015 and eliminated debt maturities until 2016," said John T. Drexler, Arch's senior vice president and chief financial officer. "This strategy has provided Arch with ample financial flexibility to overcome market headwinds."

Core Values

Arch maintained its leading position in the U.S. coal industry for safety performance and environmental compliance during 2012. Arch's 2012 lost-time safety rate was three times better than the national coal industry average, ranking the company first among its major diversified U.S. coal industry peers for the seventh consecutive year. In addition, Arch received a total of 17 national and state safety awards and honors in 2012, including the prestigious Sentinels of Safety award.

Arch also excelled in environmental stewardship in 2012, earning a total of seven environmental awards at the national, state and regional levels for its efforts in reclaiming land and safeguarding wildlife. Included among these honors, Arch became the first mining company to receive the Conservation Legacy Award from the National Museum of Forest Service History last year. The company's 2012 environmental compliance rate again ranked among the best of its major U.S. coal industry peers. Furthermore, five of Arch's operations and facilities attained *A Perfect Zero* – that is, operating with zero reportable injuries and zero environmental violations – during 2012.

"I'm extremely proud of our employees for remaining keenly focused on living our core values as well as garnering two dozen external awards and honors in 2012," said Paul A. Lang, Arch's executive vice president and chief operating officer.

Operational Results

"Arch continued to execute solid cost control – with fourth quarter 2012 consolidated cash costs declining versus the third quarter and reaching their lowest level of the year," said Lang. "In particular, our Western Bituminous Region finished 2012 with a record fourth quarter performance, which helped offset anticipated cost increases in the Powder River Basin. For the full year, our operations met – and in some cases exceeded – our expectations, despite the challenging coal market environment that prevailed during 2012."

Arch Coal, Inc.				
	4Q12	3Q12	FY12	FY11
Tons sold (in millions)	36.1	37.5	140.7	155.3
Average sales price per ton	\$24.21	\$25.57	\$25.90	\$25.34
Cash cost per ton	\$19.44	\$20.16	\$20.49	\$18.71
Cash margin per ton	\$4.77	\$5.41	\$5.41	\$6.63
Total operating cost per ton	\$22.88	\$23.50	\$24.17	\$21.68
Operating margin per ton	\$1.33	\$2.07	\$1.73	\$3.66

Consolidated results may not tie to regional breakout due to exclusion of other assets, rounding.

Operating cost per ton includes depreciation, depletion and amortization per ton.

Amounts reflected in this table have been adjusted for certain transactions.

For a description of adjustments, refer to the regional schedule at <http://investor.archcoal.com>

Arch earned \$4.77 per ton in consolidated cash margin in the fourth quarter of 2012 compared with \$5.41 per ton in the third quarter. Consolidated sales price per ton in the fourth quarter decreased 5 percent versus the third quarter, primarily reflecting lower prices on export and market-based domestic sales. Consolidated cash costs per ton declined nearly 4 percent over the same time period, due to lower costs in several operating regions and a larger percentage of lower-cost tons in the company's overall volume mix.

For full year 2012, Arch recorded a consolidated cash margin of \$5.41 per ton versus \$6.63 per ton in the prior year. Sales volume in 2012 fell by nearly 15 million tons compared with 2011, as the company elected to reduce production and close mines in response to weak coal market conditions. Consolidated sales price per ton rose slightly over the same time period, but was offset by an increase in per-ton cash costs due to operating at reduced volume levels.

Powder River Basin				
	4Q12	3Q12	FY12	FY11
Tons sold (in millions)	27.6	27.7	104.4	117.8
Average sales price per ton	\$13.12	\$13.79	\$13.61	\$13.62
Cash cost per ton	\$11.58	\$10.92	\$11.19	\$10.49
Cash margin per ton	\$1.54	\$2.87	\$2.42	\$3.13
Total operating cost per ton	\$13.18	\$12.51	\$12.79	\$11.95
Operating margin per ton	(\$0.06)	\$1.28	\$0.82	\$1.67

Operating cost per ton includes depreciation, depletion and amortization per ton.

Amounts reflected in this table have been adjusted for certain transactions.

In the Powder River Basin, Arch recorded a cash margin of \$1.54 per ton in the fourth quarter of 2012 compared with \$2.87 per ton in the third quarter. Fourth quarter sales price declined \$0.67 per ton versus the third quarter, in part due to lower prices on export sales. Cash costs increased \$0.66 per ton over the same time period, mainly reflecting anticipated higher maintenance expense.

For full year 2012, Arch earned a cash margin of \$2.42 per ton in the Powder River Basin versus \$3.13 per ton in 2011. While sales price per ton was flat in 2012 versus the prior year, sales volume declined 11 percent as the company idled equipment until coal market fundamentals improve. Cash costs per ton increased 6.7 percent over the same time period, as the impact of operating at reduced volume levels was somewhat offset by successful efforts to control costs in the region.

Appalachia				
	4Q12	3Q12	FY12	FY11
Tons sold (in millions)	4.2	4.7	18.6	19.3
Average sales price per ton	\$83.50	\$83.84	\$85.06	\$87.12
Cash cost per ton	\$70.23	\$69.19	\$69.46	\$63.40
Cash margin per ton	\$13.27	\$14.65	\$15.60	\$23.72
Total operating cost per ton	\$84.78	\$82.41	\$84.09	\$73.97
Operating margin per ton	(\$1.28)	\$1.43	\$0.97	\$13.15

Operating cost per ton includes depreciation, depletion and amortization per ton.

Amounts reflected in this table have been adjusted for certain transactions.

In Appalachia, fourth quarter 2012 cash margin per ton decreased 9 percent compared with the third quarter. Sales volumes in the fourth quarter fell nearly 11 percent versus the third quarter, as Arch elected to idle incremental higher-cost production at the Cumberland River and Vindex mining complexes. Sales price per ton declined slightly over the same time period, due to lower pricing on thermal coal sales. As anticipated, fourth quarter 2012 cash costs per ton increased slightly versus the third quarter, reflecting the company's ongoing realignment of its portfolio in the region toward metallurgical assets.

For full year 2012, Arch earned a cash margin of \$15.60 per ton in Appalachia versus \$23.72 per ton in 2011. Thermal sales volumes declined nearly 7 percent in 2012 compared with 2011, while metallurgical sales were flat at 7.5 million tons. Sales price per ton decreased 2 percent over the same time period, driven by lower pricing on metallurgical sales. Cash costs per ton in 2012 increased 9.5 percent versus 2011, due to the impact of lower volume levels and mine closures, as well as a larger percentage of metallurgical coal in the company's regional volume mix.

Western Bituminous Region				
	4Q12	3Q12	FY12	FY11
Tons sold (in millions)	3.8	4.6	15.6	17.0
Average sales price per ton*	\$37.37	\$35.50	\$35.67	\$35.72
Cash cost per ton*	\$18.69	\$23.94	\$22.20	\$24.00
Cash margin per ton	\$18.68	\$11.56	\$13.47	\$11.72
Total operating cost per ton*	\$23.15	\$27.84	\$26.80	\$28.77
Operating margin per ton	\$14.22	\$7.66	\$8.87	\$6.95

**Sales prices and costs in the region are presented f.o.b. point for domestic customers.*

Operating cost per ton includes depreciation, depletion and amortization per ton.

Amounts reflected in this table have been adjusted for certain transactions.

In the Western Bituminous Region, Arch earned a record cash margin of \$18.68 per ton in the fourth quarter of 2012 versus \$11.56 per ton in the third quarter. Volumes in the fourth quarter declined moderately compared with the third quarter. Of note, the longwall at Skyline resumed operation in late October, while the longwall at Dugout Canyon was idled after completing its final panel in the Gilson seam. Sales price per ton increased 5 percent over the same time period, reflecting a favorable mix of customer shipments. Cash costs per ton in the fourth quarter declined more than 20

percent, partially driven by incremental production from Dugout Canyon's longwall when compared with the third quarter.

For full year 2012, cash margin per ton in the Western Bituminous Region improved 15 percent versus 2011. Sales volumes in 2012 declined 8 percent year over year, while sales price per ton remained flat versus 2011. Cash costs per ton declined 7.5 percent over the same time period, benefiting from solid cost control at the company's operations in the region.

Market Trends

While coal markets remain under pressure, there are positive indications of a potential recovery in demand and pricing over the course of 2013. Among them:

- In 2013, Arch expects U.S. power producers to increase output at coal-fueled power plants – as higher natural gas prices relative to last year make western U.S. coals an increasingly competitive resource for electricity generation. Internal forecasts suggest U.S. coal consumption in 2013 will rise by as much as 50 million tons versus last year.
- Improved performance in China's manufacturing sector, resilient steel utilization rates in North America and economic stabilization in eastern and, in some cases, western Europe all point to higher steel output, and stronger metallurgical coal demand, in 2013. At the same time, global metallurgical production curtailments have reached nearly 35 million metric tonnes annualized. These supply and demand trends should lead to better balance in metallurgical markets as the year progresses.
- Colder winter temperatures in major coal-burning regions of Asia, as well as coal's competitive advantage versus other power generation fuels in Europe, should help support U.S. coal exports in 2013. Seaborne coal demand remains strong, and the company continues to field interest from overseas customers for both metallurgical and thermal coals. Arch believes 2013 U.S. coal exports should remain at elevated levels, albeit likely lower than in 2012.
- Continued rationalization of high-cost domestic supply, coupled with improved U.S. coal burn, will result in further liquidation of coal stockpiles at U.S. power generators in 2013. According to government data, U.S. coal production declined nearly 80 million tons in 2012, with the rate of decline accelerating in the fourth quarter. Production from Central Appalachia declined 36 million tons in 2012, and ended the year below 150 million tons.

"We are beginning to see signs of a recovery in coal markets after a very challenging 2012," said Eaves. "Assuming normal weather trends prevail – and economic activity continues to accelerate – we see global coal supply and demand balancing over the course of 2013, setting the stage for improved market fundamentals."

Company Outlook

Arch has established production targets for 2013, and expects sales from company-controlled operations of between 133 million and 144 million tons for the full year. Included in this range are projected sales of 8 million to 9 million tons of metallurgical coal. At expected volume levels, Arch is nearly 90 percent committed on thermal sales for 2013. Given the below-capacity production levels set for 2013, Arch currently anticipates that cash costs per ton in each of its operating regions will be similar to 2012 levels.

"On the thermal side of our business, we have layered in some sales to run our mines efficiently in 2013, but have elected to continue operating at reduced volume levels at this time," said Lang. "We have also maintained some sales leverage where we believe opportunities will present themselves over the course of 2013. On the metallurgical side, we have strong commitments from our North American customer base, and we have some of our higher-quality coals still available to capture potential upside in an improving seaborne marketplace."

Capital expenditures totaled \$395 million in 2012, which was \$145 million less than in 2011 and \$25 million less than the company's projected spend. For 2013, Arch expects capital spending to be at or below \$350 million, which includes \$100 million for the completion of the Leer metallurgical mine in Appalachia and \$80 million for reserve additions. The remaining capital expenditures will pertain to maintenance and efficiency projects.

"We expect 2013 to be a rebalancing year for global and domestic coal markets, and our current guidance range reflects this assumption," said Eaves. "Coal price increases are likely to follow what we expect will be improving coal supply and demand trends. As such, we believe our performance in the second half of 2013 is likely to be stronger than in the first half."

"Looking ahead, we will focus on what we can control – costs, capital spending and sales commitments," added Eaves. "While we can't predict exactly when demand will accelerate, we are well positioned to deliver improved results when it does. As market fundamentals strengthen, we expect a favorable impact on sales volumes and pricing in future periods."

	2013		2014	
	Tons	\$ per ton	Tons	\$ per ton
<u>Sales Volume (in millions tons)</u>				
Thermal	125 - 135			
<u>Met</u>	<u>8 - 9</u>			
Total	133 - 144			
<u>Powder River Basin</u>				
Committed, Priced	86.3	\$13.37	51.1	\$14.22
Committed, Unpriced	9.1		13.6	
Average Cash Cost		\$10.75 - \$11.50		
<u>Western Bituminous</u>				
Committed, Priced	11.4	\$38.74	7.4	\$40.86
Committed, Unpriced	1.7		0.2	
Average Cash Cost		\$24.00 - \$27.00		
<u>Appalachia</u>				
Committed, Priced Thermal	5.2	\$64.72	1.7	\$53.98
Committed, Unpriced Thermal	0.4		0.3	
Committed, Priced Metallurgical	3.9	\$93.37	-	
Committed, Unpriced Metallurgical	0.2		-	
Average Cash Cost		\$66.00 - \$72.00		
<u>Illinois Basin</u>				
Committed, Priced	2.1	\$42.50	1.7	\$42.33
Average Cash Cost		\$34.00 - \$36.00		
<u>Corporate (in \$ millions)</u>				
D,D&A		\$510 - \$540		
S,G&A		\$130 - \$140		
Interest Expense		\$360 - \$370		
Capital Expenditures		\$330 - \$360		

A conference call regarding Arch Coal's fourth quarter and full year 2012 financial results will be webcast live today at 11 a.m. Eastern time. The conference call can be accessed via the "investor" section of the Arch Coal website (<http://investor.archcoal.com>).

U.S.-based Arch Coal, Inc. is one of the world's top coal producers for the global steel and power generation industries, serving customers in 25 countries on five continents. Its network of mining complexes is the most diversified in the United States, spanning every major coal basin in the nation. The company controls a 5.5-billion-ton reserve base of high-quality metallurgical and thermal coals, with access to all major railroads, inland waterways and a growing number of seaborne trade channels. For more information, visit www.archcoal.com.

Forward-Looking Statements: *This press release contains "forward-looking statements" – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and*

financial performance, and often contain words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from changes in the demand for our coal by the domestic electric generation industry; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from operational, geological, permit, labor and weather-related factors; from fluctuations in the amount of cash we generate from operations; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a description of some of the risks and uncertainties that may affect our future results, you should see the risk factors described from time to time in the reports we file with the Securities and Exchange Commission.

Arch Coal, Inc. and Subsidiaries
Condensed Consolidated Statements of Operations
(In thousands, except per share data)

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2012	2011	2012	2011
	(Unaudited)			
Revenues	\$ 968,231	\$ 1,228,756	\$ 4,159,038	\$ 4,285,895
Costs, expenses and other operating				
Cost of sales	809,074	945,786	3,438,013	3,267,910
Depreciation, depletion and amortization	125,836	146,267	525,508	466,587
Amortization of acquired sales contracts, net	(2,628)	(16,577)	(25,189)	(22,069)
Change in fair value of coal derivatives and coal trading activities, net	13,237	(12,155)	(16,590)	(2,907)
Selling, general and administrative expenses	34,994	26,307	134,299	119,056
Contract settlement resulting from Patriot				
Coal bankruptcy	58,335	—	58,335	—
Legal contingencies	—	—	(79,532)	—
Mine closure and asset impairment costs	—	—	523,568	7,316
Goodwill and other intangible asset impairment	230,632	—	346,423	—
Acquisition and transition costs	—	1,316	—	47,360
Other operating income, net	(18,604)	(1,916)	(64,209)	(10,934)
	<u>1,250,876</u>	<u>1,089,028</u>	<u>4,840,626</u>	<u>3,872,319</u>
Income (loss) from operations	(282,645)	139,728	(681,588)	413,576
Interest expense, net:				
Interest expense	(88,416)	(75,663)	(317,626)	(230,186)
Interest and investment income	1,910	968	5,478	3,309
	<u>(86,506)</u>	<u>(74,695)</u>	<u>(312,148)</u>	<u>(226,877)</u>
Other nonoperating expenses				
Net loss resulting from early retirement and refinancing of debt	(4,626)	—	(23,668)	(1,958)
Bridge financing costs related to ICG	—	—	—	(49,490)
	<u>(4,626)</u>	<u>—</u>	<u>(23,668)</u>	<u>(51,448)</u>
Income (loss) before income taxes	(373,777)	65,033	(1,017,404)	135,251
Benefit from income taxes	(78,354)	(6,182)	(333,717)	(7,589)

Net income (loss)	(295,423)	71,215	(683,687)	142,840
Less: Net income attributable to noncontrolling interest	—	(335)	(268)	(1,157)
Net income (loss) attributable to Arch Coal, Inc.	<u>\$ (295,423)</u>	<u>\$ 70,880</u>	<u>\$ (683,955)</u>	<u>\$ 141,683</u>
Earnings (loss) per common share				
Basic earnings (loss) per common share	<u>\$ (1.39)</u>	<u>\$ 0.34</u>	<u>\$ (3.24)</u>	<u>\$ 0.75</u>
Diluted earnings (loss) per common share	<u>\$ (1.39)</u>	<u>\$ 0.33</u>	<u>\$ (3.24)</u>	<u>\$ 0.74</u>
Weighted average shares outstanding				
Basic	<u>212,048</u>	<u>211,416</u>	<u>211,381</u>	<u>190,086</u>
Diluted	<u>212,048</u>	<u>211,840</u>	<u>211,381</u>	<u>190,905</u>
Dividends declared per common share				
	<u>\$ 0.03</u>	<u>\$ 0.11</u>	<u>\$ 0.20</u>	<u>\$ 0.43</u>
Adjusted EBITDA (A)				
	<u>\$ 71,195</u>	<u>\$ 270,399</u>	<u>\$ 688,454</u>	<u>\$ 921,138</u>

(A) Adjusted EBITDA is defined and reconciled under "Reconciliation of Non-GAAP Measures" later in this release.

Arch Coal, Inc. and Subsidiaries
Condensed Consolidated Balance Sheets
(In thousands)

	December 31,	
	2012	2011
	(Unaudited)	
Assets		
Current assets		
Cash and cash equivalents	\$ 784,622	\$ 138,149
Restricted cash	3,453	10,322
Short term investments	234,305	—
Trade accounts receivable	247,539	380,595
Other receivables	84,541	88,584
Inventories	365,424	377,490
Prepaid royalties	11,416	21,944
Deferred income taxes	67,360	42,051
Coal derivative assets	22,975	13,335
Other	92,469	110,304
Total current assets	<u>1,914,104</u>	<u>1,182,774</u>
Property, plant and equipment, net	7,337,098	7,949,150
Other assets		
Prepaid royalties	87,773	86,626
Goodwill	265,423	596,103
Equity investments	242,215	225,605
Other	160,164	173,701
Total other assets	<u>755,575</u>	<u>1,082,035</u>
Total assets	<u>\$10,006,777</u>	<u>\$10,213,959</u>
Liabilities and Stockholders' Equity		
Current liabilities		

Accounts payable	\$ 224,418	\$ 383,782
Coal derivative liabilities	1,737	7,828
Accrued expenses and other current liabilities	318,018	348,207
Current maturities of debt and short-term borrowings	32,896	280,851
Total current liabilities	577,069	1,020,668
Long-term debt	5,085,879	3,762,297
Asset retirement obligations	409,705	446,784
Accrued pension benefits	67,630	48,244
Accrued postretirement benefits other than pension	45,086	42,309
Accrued workers' compensation	81,629	71,948
Deferred income taxes	664,182	976,753
Other noncurrent liabilities	221,030	255,382
Total liabilities	7,152,210	6,624,385
Redeemable noncontrolling interest	—	11,534
Stockholders' Equity		
Common stock	2,141	2,136
Paid-in capital	3,026,823	3,015,349
Treasury stock, at cost	(53,848)	(53,848)
Retained earnings (accumulated deficit)	(104,042)	622,353
Accumulated other comprehensive loss	(16,507)	(7,950)
Total stockholders' equity	2,854,567	3,578,040
Total liabilities and stockholders' equity	\$10,006,777	\$10,213,959

Arch Coal, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(In thousands)

	December 31,	
	2012	2011
	(Unaudited)	
Operating activities		
Net income (loss)	\$ (683,687)	\$ 142,840
Adjustments to reconcile to cash provided by operating activities:		
Depreciation, depletion and amortization	525,508	466,587
Amortization of acquired sales contracts, net	(25,189)	(22,069)
Noncash mine closure and asset impairment costs	515,491	7,316
Goodwill and other intangible asset impairment	330,680	—
Amortization relating to financing activities	20,238	14,067
Net loss resulting from early retirement of debt and refinancing activities	23,668	1,958
Bridge financing costs related to ICG	—	49,490
Prepaid royalties expensed	22,650	34,842
Employee stock-based compensation expense	11,822	10,882
Changes in:		
Receivables	113,531	(74,914)
Inventories	9,468	(50,900)
Coal derivative assets and liabilities	(13,158)	6,079
Accounts payable, accrued expenses and other current liabilities	(171,580)	52,191
Income taxes, net	27,545	(21,759)
Deferred income taxes	(336,036)	10,519
Asset retirement obligations	(42,531)	3,868

Other	4,384	11,245
Cash provided by operating activities	332,804	642,242
Investing activities		
Acquisition of businesses, net of cash acquired	—	(2,894,339)
Capital expenditures	(395,225)	(540,936)
Additions to prepaid royalties	(13,269)	(29,957)
Proceeds from dispositions of property, plant and equipment	22,825	25,887
Purchases of short term investments	(236,862)	—
Proceeds from sales of short term investments	1,754	—
Investments in and advances to affiliates	(17,758)	(61,909)
Purchase of noncontrolling interest	(17,500)	—
Change in restricted cash	6,869	5,167
Consideration paid related to prior business acquisitions	—	(829)
Cash used in investing activities	(649,166)	(3,496,916)
Financing activities		
Proceeds from the issuance of senior notes	359,753	2,000,000
Proceeds from term note	1,633,500	—
Proceeds from the issuance of common stock, net	—	1,267,933
Payments to retire debt	(452,934)	(605,178)
Net increase (decrease) in borrowings under lines of credit and commercial paper program	(481,300)	424,396
Payments on term note	(7,625)	—
Net payments on other debt	(682)	5,334
Debt financing costs	(50,568)	(114,823)
Dividends paid	(42,440)	(80,748)
Issuance of common stock under incentive plans	5,131	2,316
Cash provided by financing activities	962,835	2,899,230
Increase in cash and cash equivalents	646,473	44,556
Cash and cash equivalents, beginning of period	138,149	93,593
Cash and cash equivalents, end of period	\$ 784,622	\$ 138,149

Arch Coal, Inc. and Subsidiaries

Schedule of Consolidated Debt

(In thousands)

	December 31,	
	2012	2011
	(Unaudited)	
Indebtedness to banks under credit facilities	\$ —	\$ 481,300
Term loan (\$1.6 billion face value) due 2018	1,627,383	—
6.75% senior notes (\$450.0 million face value) due 2013	—	450,971
8.75% senior notes (\$600.0 million face value) due 2016	590,999	588,974
7.00% senior notes due 2019 at par	1,000,000	1,000,000
9.875% senior notes (\$375.0 million face value) due 2019	360,042	—
7.25% senior notes due 2020 at par	500,000	500,000
7.25% senior notes due 2021 at par	1,000,000	1,000,000
Other	40,349	21,903

	5,118,773	4,043,148
Less: current maturities of debt and short-term borrowings	32,896	280,851
Long-term debt	\$ 5,085,877	\$ 3,762,297
Calculation of net debt		
Total debt	\$ 5,118,773	\$ 4,043,148
Less liquid assets		
Cash and cash equivalents	784,622	138,149
Short term investments	234,305	—
	1,018,927	138,149
Net debt	\$ 4,099,846	\$ 3,904,999

Arch Coal, Inc. and Subsidiaries
Reconciliation of Non-GAAP Measures
(In thousands)

Included in the accompanying release, we have disclosed certain non-GAAP measures as defined by Regulation G.

The following reconciles these items to net income and cash flows as reported under GAAP.

Adjusted EBITDA

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

Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded from Adjusted EBITDA are significant in understanding and assessing our financial condition. Therefore, Adjusted EBITDA should not be considered in isolation, nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. We believe that Adjusted EBITDA presents a useful measure of our ability to incur and service debt based on ongoing operations. Furthermore, analogous measures are used by industry analysts to evaluate our operating performance. In addition, acquisition related expenses are excluded to make results more comparable between periods. Investors should be aware that our presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies. The table below shows how we calculate Adjusted EBITDA.

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2012	2011	2012	2011
	(Unaudited)			
Net income (loss)	\$ (295,423)	\$ 71,215	\$ (683,687)	\$ 142,840
Income tax benefit	(78,354)	(6,182)	(333,717)	(7,589)
Interest expense, net	86,506	74,695	312,148	226,877
Depreciation, depletion and amortization	125,836	146,267	525,508	466,587
Amortization of acquired sales contracts, net	(2,628)	(16,577)	(25,189)	(22,069)
Mine closure and asset impairment costs	—	—	523,568	7,316
Goodwill and other intangible asset impairment	230,632	—	346,423	—
Acquisition and transition costs	—	1,316	—	56,885
	4,626	—	23,668	51,448

Other nonoperating expenses				
Net income attributable to noncontrolling interest	—	(335)	(268)	(1,157)
Adjusted EBITDA	<u>\$ 71,195</u>	<u>\$ 270,399</u>	<u>\$ 688,454</u>	<u>\$ 921,138</u>

Adjusted net income and adjusted diluted earnings per common share

Adjusted net income and adjusted diluted earnings per common share are adjusted for the after-tax impact of acquisition related costs and are not measures of financial performance in accordance with generally accepted accounting principles. We believe that adjusted net income and adjusted diluted earnings per common share better reflect the trend of our future results by excluding items relating to significant transactions. The adjustments made to arrive at these measures are significant in understanding and assessing our financial condition. Therefore, adjusted net income and adjusted diluted earnings per share should not be considered in isolation, nor as an alternative to net income or diluted earnings per common share under generally accepted accounting principles.

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2012	2011	2012	2011
	(Unaudited)			
Net income (loss) attributable to Arch Coal	\$ (295,423)	\$ 70,880	\$ (683,955)	\$ 141,683
Amortization of acquired sales contracts, net	(2,628)	(16,577)	(25,189)	(22,069)
Mine closure and asset impairment costs	—	—	523,568	7,316
Goodwill and other intangible asset impairment	230,632	—	346,423	—
Acquisition and transition costs	—	1,316	—	56,885
Other nonoperating expenses	4,626	—	23,668	51,448
Tax impact of adjustments	(25,905)	5,890	(261,166)	(30,063)
Adjusted net income (loss) attributable to Arch Coal	<u>\$ (88,698)</u>	<u>\$ 61,509</u>	<u>\$ (76,651)</u>	<u>\$ 205,200</u>
Diluted weighted average shares outstanding	<u>212,048</u>	<u>211,840</u>	<u>211,381</u>	<u>190,905</u>
Diluted earnings (loss) per share	\$ (1.39)	\$ 0.33	\$ (3.24)	\$ 0.74
Amortization of acquired sales contracts, net	(0.01)	(0.08)	(0.12)	(0.12)
Mine closure and asset impairment costs	—	—	2.48	0.04
Goodwill and other intangible asset impairment	1.09	—	1.64	—
Acquisition and transition costs	—	0.01	—	0.30
	0.02	—	0.11	0.27

Other nonoperating

expenses

Tax impact of adjustments	(0.13)	0.03	(1.23)	(0.16)
Adjusted diluted earnings				
(loss) per share	\$ (0.42)	\$ 0.29	\$ (0.36)	\$ 1.07



RELATED SEARCHES

1. List of Penny Stocks

2. Investing in Mutual Funds

3. Industry Research Reports

4. Online Market Research

5. Stock Research Tools

6. Top 10 Trading Strategies

7. Free Credit Report

8. Private Equity Research

9. Penny Stocks to Watch

10. Best Dividend Stocks

11. Cheapest Places to Retire

12. Retirement Calculator

ads by Yahoo!



Copyright © 2013 PR Newswire. All rights reserved. Replication or redistribution of PRNewswire content is expressly prohibited without the prior written consent of PRNewswire. PRNewswire shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.

Copyright © 2013 Yahoo! Inc. All rights reserved. /

APPENDIX 38

MARKET SNAPSHOT

U.S.	EUROPE	ASIA
DJIA	14,508.00	-4.05 -0.03%
S&P 500	1,562.23	+5.34 0.34%
NASDAQ	3,251.59	+6.59 0.20%



Our Company | Professional | Anywhere

Search News, Quotes and Opinion

HOME QUICK NEWS OPINION MARKET DATA PERSONAL FINANCE TECH POLITICS SUSTAINABILITY TV VIDEO RADIO



What U.S. Debt Crisis? Lending Data Back Blasé Boehner
Q



Shilling: Growth Could End Fed's War on Deflation
Q



Ferrari FF: The World's Only 200 Mph 'Family' Car
Q

Arch Coal Loss Wider Than Expected as Sales Volumes Fall

By Sonja Elmquist - Feb 5, 2013 9:18 AM ET

1 COMMENT

Q QUEUE

Arch Coal Inc. (ACI), the country's fourth-largest producer of the fuel, reported quarterly revenue and a loss that were worse than expected after sales volumes declined 15 percent on weaker demand.

The fourth-quarter net loss was \$295.4 million, or \$1.39 a share, compared with net income of \$70.9 million, or 33 cents, a year earlier, St. Louis-based Arch said in a statement today. Excluding an asset writedown and other items, the loss was 42 cents a share, missing the 14 -cent average of 23 analysts' estimates compiled by Bloomberg.

Revenue fell to \$968.2 million from \$1.23 billion a year earlier, missing the \$1.01 billion average of 15 estimates. Arch fell 4 percent to \$6.65 at 9:17 a.m. in [New York](#) before the start of regular trading.

Arch sells thermal coal used to generate electricity and metallurgical coal, a steelmaking raw material. Domestic thermal coal demand tumbled last year amid mild weather and as prices for natural gas, a competing fuel, dropped to the lowest in a decade. Arch, which has now reported four straight quarterly adjusted losses, said today its coal sales will be 133 million to 144 million tons of coal in 2013. Volumes dropped to 141 million tons from 155 million tons.

Peabody Energy Corp. is the country's largest coal producer by sales, followed by Alpha Natural Resources Inc. and Consol Energy Inc.

(Arch scheduled a conference call at 11 a.m. New York time, which can be accessed at <http://investor.archcoal.com>.)

To contact the reporter on this story: Sonja Elmquist in New York at selmquist1@bloomberg.net

To contact the editor responsible for this story: Simon Casey at scasey4@bloomberg.net

More News: Energy Markets
1 COMMENT
Q QUEUE

GET THE MARKET NOW NEWSLETTER. [Learn more](#)

GET THE MARKET NOW NEWSLETTER.

[Learn more](#)

HEADLINES MOST POPULAR RECOMMENDED

U.S. Stocks Advance After Cyprus Meets Bailout Conditions
Q

SEC Approves Nasdaq's \$62 Million Settlement for Facebook
Q

Gay Marriage as Supreme Ruling Recalls Dred Scott, Selma
Q

Rajaratnam Said to Be in Custody, Appear on Charges Today
Q

Zuckerberg's Harvard Legacy Allows HBO's 'Girls' in Dorms
Q

Risk Unrewarded as Emerging Stocks Lag Behind Most Since '98
Q

More News >>

Advertisement

5/1 ARM mortgage rates in Steubenville, OH

	Mon Mar 25 2.375% Rate APR:2.774% Fees:\$0	See details Est payment \$641 <input type="button" value="Go"/>
	Mon Mar 25 1.625% Rate APR:2.738% Fees:\$1,995	See details Est payment \$579 <input type="button" value="Go"/>
	Mon Mar 25 3.000% Rate APR:3.032% Fees:\$950	See details Est payment \$696 <input type="button" value="Go"/>

See all rates Criteria used [Bankrate.com](#)

Most Popular On

Social Security Is Not as Bad as You Think

Micro-Apartments in the Big City: A Trend Builds

Best Undergraduate Business Schools 2013

Videos You May Like



View from Earth's Highest Peaks: Google Goes Hiking Q



A Car That Runs on Air, Water: Here's How It Works Q



Inside America's Hottest Private Jet Fleet Q



Shed It All: A Rich Man Downsizes to 400 Square Ft. Q

by Taboola

Is This the Least Powerful Man in Washington?

America's 50 Best Cities

Visit Businessweek.com

News From Around the Web

by Taboola

5 Signs You'll Get Cancer (Newsmax)

Derby Jackpot: Horse Racing is the new Online Poker (Derby Jackpot)

Andy Murray Celebrates Grand Slam with \$6 Lemon Soda (and \$6,500 Bar Tab) | The Daily Meal

Employees Graded High Marks for Positive 401(k) Actions (Millionaire Corner)

10 Tips for Shopping at a Thrift Store (CouponShoeBox)

5 Exercises You Don't Do but Should (Daily Health Post)

From Around the Web

by Taboola



Major Moves Ahead For U.S. Investors



Most Overrated Exercise You Can Stop



Movie Star Workouts: How These Celebs Look



Investor's Business Daily: Stock Market, Cyprus Crisis

Bloomberg moderates all comments. Comments that are abusive or off-topic will not be posted to the site. Excessively long comments may be moderated as well. Bloomberg cannot facilitate requests to remove comments or explain individual moderation decisions.

Like

Add New Comment

Type your comment here.

Showing 1 comment on Arch Coal Loss Wider Than Expected as Sales Volumes Fall

JDL51 1 month ago

Ouch.

Like Reply

Login

Sponsored Links

Prudential Investments
www.investments.prudential.com
Learn About Prudential's Mutual Funds Family!



Silver Correction Coming
www.Sovereign-Investor.com
Here's What to Do When Silver Corrects. See New Report...



Forrester BYOD Report
Absolute.com
View Free Forrester Report on BYOD and mobile device management



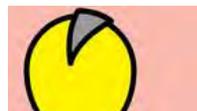
AdChoices

Advertisement

Advertisements



Recommended Stories



Boehner Declaring No Debt Crisis Revealed in Lending Data Q	Cyprus Salvaged After ECB Deal Shuts Bank to Get \$13B Q	Cyprus Said to Reach Tentative Deal to Avert Default Q	Faster Growth Could End Fed's War on Deflation Q	South Korea Escalates Concern with Japan Policies on Yen Q	Cyprus Teeters on Brink as Euro Crisis Battle Crisis Q
---	--	--	--	--	--

BLOOMBERG.COM [News](#) | [Opinion](#) | [Markets](#) | [Personal Finance](#) | [Tech](#) | [Sustainability](#) | [TV](#) | [Video](#) | [Radio](#) | [Archives](#)
ABOUT [Our Company](#) | [Careers](#) | [Advertising](#) | [Licensing](#) | [Press Room](#) | [Trademarks](#) | [Terms of Service](#) | [Privacy Policy](#)
SUPPORT AND CONTACT [Customer Support](#) | [Contacts](#) | [Feedback](#) | [Help](#) | [Sitemap](#)
STAY CONNECTED [Twitter](#) [Facebook](#) [Linked In](#) [google+](#) [StumbleUpon](#)

BLOOMBERG TERMINAL
[Professional](#)
[Subscriber Login](#)
[FAQ](#)

RELATED BLOOMBERG SITES

[Bloomberg Businessweek](#) [Bloomberg Markets Magazine](#)
[Bloomberg Institute](#) [Open Bloomberg](#)
[ブルームバーグ\(日本語\)](#) [Bloomberg Link](#)
[会社概要\(日本語\)](#) [Bloomberg Blog](#)
[关于彭博中国](#) [Bloomberg Books](#)

BLOOMBERG PREMIUM SERVICES

[Bloomberg Briefs](#) [Bloomberg New Energy Finance](#)
[Bloomberg Government](#) [Bloomberg Sports](#)
[Bloomberg Law](#) [BloombergBlack](#)
[Bloomberg BNA](#)

MOBILE APPS

[Bloomberg](#)
[Bloomberg Radio+](#)
[Bloomberg TV+](#)
[Bloomberg Businessweek+](#)
[Bloomberg Markets+](#)
[Bloomberg Anywhere](#)

©2013 BLOOMBERG L.P. ALL RIGHTS RESERVED.

[Jobs by Indeed](#) [Rate this Page](#) [Made in NYC](#) [Ad Choices](#)

Q
[What is the queue?](#)
[More »](#) Items In Your queue
This is your Bloomberg Queue
 The queue will help you find news, save stories for later and take them with you
[Learn More](#)[Close](#)
[More »](#) New Suggestions

APPENDIX 39

Seeking Alpha α

Arch Coal's CEO Discusses Q4 2012 Results - Earnings Call Transcript

Executives

Jennifer Beatty - Vice President, Investor Relations

John Eaves - President and Chief Executive Officer

Paul Lang - Executive Vice President and Chief Operating Officer

John Drexler - Senior Vice President and Chief Financial Officer

Analysts

Brandon Blossman - Tudor Pickering Holt & Company

Mitesh Thakkar – FBR

Shneur Gershuni - UBS

Brian Yu - Citi

Jim Rollyson - Raymond James

Lucas Pipes – Brean Capital

John Bridges - JPMorgan

Kuni Chen - CRT Capital Group

David Gagliano - Barclays

David Martin - Deutsche Bank

Andre Benjamin - Goldman Sachs

Chris Haberlin - Davenport & Company

Meredith Bandy - BMO Capital Markets

Evan Kurtz - Morgan Stanley

Lance Ettus - Tuohy Brothers

Dave Katz - JPMorgan

Arch Coal, Inc. ([ACI](#)) Q4 2012 Earnings Conference Call February 5, 2013 11:00 AM ET

Operator

Good day, everyone and welcome to this Arch Coal Incorporated Fourth Quarter 2012 Earnings Release Conference Call. Today's call is being recorded. At this time, I would like to turn the call over to Ms. Jennifer Beatty, Vice President of Investor Relations. Please go ahead.

Jennifer Beatty

Good morning from St. Louis. Thanks for joining us today. Before we begin, let me remind you that certain statements made during this call, including statements relating to our expected future business and financial performance may be considered forward-looking statements, according to the Private Securities Litigation Reform Act. Forward-looking statements by their nature address matters that are to different degrees uncertain.

These uncertainties, which are described in more detail in the annual and quarterly reports that we file with the Securities and Exchange Commission may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. I would also like to remind you that you can find a reconciliation of the non-GAAP financial measures that we plan to discuss this morning at the end of our press release, a copy of which we have posted in the Investor section of our website at archcoal.com.

On the call this morning we have John Eaves, Arch's President and CEO; Paul Lang, Arch's Executive Vice President and COO; and John Drexler, our Senior Vice President and CFO. John, Paul and John will begin the call with some brief formal remarks, and thereafter, we will be happy to take your questions. John?

John Eaves

Good morning everyone. Today, I'd like to spend a few moments highlighting milestones that Arch achieved in 2012 despite the market downturn we have been facing. Last year, Arch generated \$688 million in EBITDA. As 2012 unfold, it became clear that we were going to see a contraction versus 2011 thus we began cutting our capital spending significantly. As a result, we ended the year in only slightly negative territory for free cash flow even if we are moving ahead on the Leer mine development.

We also successfully bolstered our cash and liquidity resources in 2012 to write out the storm and to emerge as even stronger players when market recovers. John Drexler will highlight those financing initiatives in his prepared remarks. Of course, one of the most important milestones that Arch achieved in 2012 was another strong performance in safety and environmental stewardship. For the seventh year in a row, we ranked first among our major diversified coal peer for our safety record and garnered 24 external awards for outstanding achievement in our core values. In addition, five of our complexes completed 2012 without a single safety incident on environmental violation. What's more, we advanced the build out of our low-cost high-quality metallurgical coal platform in Appalachia and held the line on cost in other regions. We believe the addition of Leer will further enhance our competitive position within the industry and will serve us well in the coming market up-cycle.

Lastly, we are building momentum in the seaborne coal markets. Our exports hit a record 13.6 million tons in 2012, that's a fourfold increase since 2009. We sent met and thermal coal to Europe and South America and to new places in the Middle East and Asia. Our top destination for exports in 2012 was South Korea. Our increased participation in the seaborne coal trade reflects the growing worldwide consumption of coal as well as the strengthening of Arch's position in the competitive landscape. With our low-cost operations and growing port access, we are well-positioned to benefit from the changing dynamics in the seaborne market. We see exports as a long-term development opportunity as a way to diversify our customer base and as a way to unlock further value for our reserves. Growth overseas will also help offset our expectation for a relatively flat coal use here at home.

While these international netback prices don't always offer a substantial return today, we believe prices will rebound as market fundamentals improve. In fact, we continue to field enquires about shipping our coal overseas and are building new business in this rapidly growing arena. That's why we think U.S. exports will continue at elevated levels and certainly exceed 100 million tons in 2013 whether we approach the record levels achieved in 2012 remains to be seen and we'll ultimately dependent on the evolution of coal markets throughout the year.

Turning now to discussion of coal market fundamentals, 2012 could well prove to be at the trough. Global benchmark metallurgical prices declined 50% since their peak a year and a half ago while U.S. thermal coal consumption declined to levels we haven't seen since the mid-90s. Needed economic activity, unseasonably warm weather and low natural

gas prices all converge the dampen coal demand, causing coal stockpiles to grow to near record levels by May of last year. However we're encouraged to see stabilization in the back half of 2012 based upon these dynamics we believe that we're moving up the bottom as we head into 2013. Net coal markets are beginning to show some signs of life, inquiries that were non-existent six months ago are emerging. Utilization of steel mills is improving and China's economy seems to be picking up.

On the supply side production cuts and constraints are beginning to take hold and should start to have a greater impact as the year progresses. Thermal coal markets appear poised for better days as well while winter weather has not been very cold, it has been better than last year. So far this season heating degree days are up 5%, we estimate coal stockpiles into 2012 in a 182 million tons well below the peak from last May but about 10 million tons higher than they were at the end of 2011. Thus we expect to exit this winter season with coal inventories above normal but are forecasting draw downs in January and February.

That's still a lot better than the 30 million ton build we had from last winter. In addition prices for natural gas are high enough to give western coals an economic advantage on the dispatch curve. At the same time we believe that natural gas prices were unsustainably low today as companies cannot make sufficient returns to justify continued investment as evidenced by the rig count decline.

Overtime we expect market forces to move gas prices higher which further booster coals competitiveness in the power sector. We also believe that coal that U.S. generators enter 2013 with conservative burn forecast and could potentially fund themselves needing coal as the year progresses. This development should initially help to reduce the stockpile overhang that could eventually lead to more active and dynamic market in the second half of the year and into 2014. One area that's definitely helping to turn coal markets around the supply shut-outs.

The higher estimates, net coal supply cuts, totaled nearly 35 million metric tons annualized. On the thermal side the cuts are even larger. According to recent industry data the U.S. coal industry reduced production by nearly 80 million tons in 2012. PRB led the way with 38 million tons of volume reductions and Central App was close behind with a decline of 36 million tons.

In fact, Central App, produced just a 148 million tons in 2012 but even more striking is fourth quarter run rate is below a 130 million tons annualized. For 2013, we expect global supply to fall further as high price contracts roll-up, trader inventories liquidate and the higher cost supply exists the market altogether. These trends should help rebalance supply and demand as the year progresses, setting the backdrop for a reason. In closing I want to reiterate, whereas it's never found at the bottom of the market cycle we as a company had been here before and we know what it takes to manage through the trouble so we're ready to capitalize on the market rebound.

Underlying fundamentals and begin to improve first and our financial results will follow. In the meantime we'll continue executing the strategy, it has allowed us to mitigate the headwinds that we have been facing.

We'll stay focused on what we can control, capital spending, cost and commitments. We'll also look for ways to optimize our portfolio and won't roll-out further curtailments or divestitures as we focus on unlocking value for assets. With that in mind, I'll now turn the call over to our COO, Paul Lang for discussion of Arch's recent operating performance and outlook for 2013. Paul?

Paul Lang

As John mentioned I would like to highlight our continued focus areas in 2013, these are keeping our cash cost and capital spending levels low and continue to strength our sales commitment portfolio. In the fourth quarter our overall cash cost per ton declined from the third quarter levels and represented our best quarterly performance of the year. Driving these results was an exceptional fourth quarter performance in our Western by bituminous region which helped offset higher planned maintenance expense in the Powder River Basin. For full year 2012 we held the line on cost in all of our operating regions, this was a notable accomplishment when you consider how significantly we reduced production over the course of the year as you know spreading highly fixed cost over lower volume effects unit cost and that is reflected in our operating performance in 2012.

In our largest volume region, the Powder River Basin our cash cost in 2012 were up 7% year-over-year while our sales volume declined 11%. We proactively mitigated the impact of the weak coal market by adding equipment and took other steps that contain cost. During the downturn, we stepped up our reclamation efforts and received the benefit of completing this work faster and add lower costs than we have been incurred with contractors. Our efforts will also allow us to sequence future reclamation work with greater flexibility. Going forward, the demand outlook for this region is expected to improve, but at this time, we have two draglines and eight shovels as well as their related support

equipment idle at our operations. As domestic supply overhang corrects, we expect to deploy this equipment and recapture some of the loss volume which will benefit our cost structure over time.

In our Western Bituminous region, we successfully reduced our cash cost per ton year-over-year despite running at lower volume levels in 2012. Late in 2011, we significantly restructured our operating profile in the region by reducing production out of our Dugout Canyon mine and shifting volumes to other lower cost mines. We also transitioned to a new mining area at our Skyline mine in the fourth quarter of 2012 successfully completing a major transition of that operation. Looking ahead, we are optimistic about the market for Western Bituminous coal, we are seeing a slight pickup in domestic demand due to improvements in the construction sector and higher natural gas prices. In addition, export opportunities are improving for this region and should increase further as port capacity materially expands in 2014.

In Appalachia, our sales volume declined in 2012 as expected with our portfolio realignment in the region. During the year, we closed 10 higher cost thermal and incremental metallurgical operations. We decreased production at other active operations and we've reduced our overall workforce by nearly 17%.

Our overall cash cost per ton increased in Appalachia during 2012 which is consistent with our ongoing shift to a higher metallurgical coal output. Even with this cost increase, our Appalachian segment represents for the lowest cost operating profiles in the region. Looking ahead, we continue to optimize our assets in Appalachia and anchor our thermal production at our lowest cost asset coal met mine. Our metallurgical platform will consist of our lowest cost mine, Mountain Laurel along with operations producing higher quality coal such as Beckley and Sentinel.

As John mentioned, our coking coal profile will further be enhanced by the addition of the Leer mine as that operation reach full production in 2014, we project its cost structure will be in line with our overall average for the region. In the fourth quarter, we have continued to make solid progress on the development of the Leer mine and we completed the slope construction in December. We have also started the process of test marketing the coal with steelmakers in North America, Europe and Asia. Just like Mountain Laurel, we believe Leer will be a sought-after premium brand in its category, given its large reserve base, good cost structure, and homogenous quality. We also recognized that it takes times for steelmakers to introduce new coals into their blends. Currently, we expect the longwall at Leer to startup sometime during the third quarter and continue to monitor the state of the coking coal markets closely.

Turning now to capital spending, we have cut about \$200 million that of our capital plan since 2011 and our actual spend in 2012 came in \$25 million favorable to the target. For 2013, we expect capital spending of \$350 million or less. That level allows us to adequately maintain our existing operation and still that suspend on value-enhancing projects, including the Leer development as well as the replenishment of our reserve base.

Lastly, I want to touch on our sales commitments. On the metallurgical side, we sold 7.5 million tons at an average price of \$113 per ton in 2012. We are targeting higher sales in 2013 mainly due to incremental volumes from Leer. At the same time, our product mix is improving. In 2013, 40% of our metallurgical sales should be a blend of low-vol and high-vol A coal, and we expect that percentage increase in the future. To give this change on context, our product mix is already up from roughly 33% of low-vol and high-vol A in 2012, and it was less than 20% in 2011. We are not only producing more metallurgical coal, but we are producing a higher quality product mix.

We have booked nearly half of our targeted metallurgical sales in 2013 in an average price of \$93 a ton while that pricing is lower than what we garnered in 2012, it reflects the higher blend of high well-being in PCI sales than we had last year as well as some carry over volume. For 2013, we've strategically left open a larger percentage of our higher quality brand such as Beckley. Although international prices are low at the moment, we expect those markets will strengthen as we progress through 2013 and remain optimistic about to play some of those products both domestically and overseas. While on the thermal side we've layered in some sales to run our mind efficiently in 2013 while continuing to produce a slight significantly reduced volume levels. We're roughly 90% committed based on the mid-point of our guidance range and have maintained sales leverage where we believe opportunities will present themselves over the course of the year.

As discussed we're encouraged by what we're seeing in the domestic and international arena for Western Bituminous coals and in Appalachia the domestic industrial sector remain solid which is helping to provide an offset to soft thermal markets in the region.

In the Powder River Basin, we placed some business in 2013 for both 8800 and 8400 coals that will reduce our sales exposure in near term and position us to operate our minds more steadily. We've also leveraged those sales throughout the year commitments at more attractive prices and have retained a productive to significantly benefit from improving market fundamentals. While our sales profile in 2013 will likely be waived down by lower realized prices on export sales

we continue to pursue key contracts to fulfill our longer term strategic goal increasing our stake in the seaborne coal trade.

As John noted South Korea is the single largest country, we did business with on the international front in 2012. We believe this relationship will continue to grow as country builds out a coal generation fleet that is designed burned sub-bituminous coal with its consistent quality, high reliability and extensive reserve base, the Powder River Basin will increasingly play a larger role in Korea as well as the broader Asia-Pacific region.

With that I'll now turn the call over to John Drexler, Arch's CFO to provide an update on our consolidated financial results and liquidity position. John?

John Drexler

Thank you Paul. As John and Paul have described we're beginning to see some signs of improvement in coal markets, however the timing and magnitude of a recovery remain uncertain. This reality is what prompted us to undertake the financing transactions that we completed in the fourth quarter. We increased our cash on hand by nearly \$370 million and decreased our short term borrowings by 100 million. At the end of 2012 we had cash and short term investments of just over \$1 billion and no borrowings under our credit facilities. Our available liquidity totaled 1.4 billion at December 31 which was up \$400 million compared to the third quarter. Following these strategic moves we're in a very strong liquidity position with the majority of our liquidity in the form of cash. In addition, these transactions relax the financial maintenance covenants in our revolving credit facility creating ample financial flexibility to manage through the market headwinds.

Although we don't expect the current cycle to be prolonged, we're prepared for that contingency. We have a structure in place that will allow us to fund our operations and our ongoing growth plans with (inaudible). While aggressively allowing us to pay down debt as market fundamentals improve. Turning to our quarterly results, Arch reported adjusted EBITDA of \$71 million for the three months ended December 31. These results were impacted by a \$58 million charge or \$0.17 per share that reflects the rejection of a customer supply contract by the U.S. bankruptcy court and the assumption of the contract obligation by Arch. Absent the charge EBITDA would have been \$130 million. Other notable items in the quarter's results were intangible asset impairment charges totally \$231 million or \$0.97 per share. With the vast majority of VAT charge related to goodwill. We're required to perform a goodwill impairment review on an annual basis or as conditions warrant. The results of our testing indicated that a portion of our goodwill was impaired mainly due to the material decline and benchmark metallurgical coal prices.

This one-time non-cash charge did not impact our cash flows, liquidity, our on-going business operations. Income taxes for the fourth quarter included a charge of \$24 million or \$0.11 per share to increase the valuation allowance for certain state net operating loss carry-forwards. Our evaluation of our deferred tax assets indicated that these loss carry-forwards were likely not recoverable requiring them to be written off.

Finally, the income statement line for coal derivative and trading activity reflects an expense of \$13 million in the fourth quarter. As I discussed on the third quarter call, this paper loss was primarily due to the expiration of in the money API-2 swap position that we entered into to hedge the price of export shipments. The cash income we received from the settlement of those positions more than offsets that loss, but for reporting purposes, the corresponding income is reported under the other operating income lines.

Lastly, I'd like to discuss our guidance for 2013. We expect thermal sales volumes in the range of 125 million to 135 million tons with met sales in the range of 8 million to 9 million tons. Cash cost in the range of \$10.75 to \$11.50 per ton in the Powder River Basin; cash cost between \$24 and \$27 per ton in the Western Bituminous region; cash cost of \$66 to \$72 per ton in Appalachia; and cash cost of \$34 to \$36 per ton in the Illinois Basin. DD&A in the range of \$510 million to \$540 million, SG&A in the range of \$130 million to \$140 million, interest expense between \$360 million and \$370 million, and capital expenditures of \$330 million to \$360 million. Given our current outlook and the impact of percentage depletion, we expect the tax benefit in the range of 30% to 50%.

Our guidance assumes that we will continue to manage cost and capital in 2013 as we successfully did in 2012. Depending on the trajectory of markets during the course of 2013, it is likely that our operating cash flows will be below that of last year. We will continue to work towards improving cash flows for the year from continued expense reduction and ongoing capital discipline to even more stringent working capital management to asset divestitures. We are confident that Arch is well-positioned to weather this downturn and to outperform and create substantial shareholder value as market conditions improve.

With that, we are ready to take questions. Operator, I will turn the call back over to you.

Question-and-Answer Session

Operator

Thank you. (Operator Instructions) And our first question will come from Brandon Blossman of Tudor Pickering Holt & Company.

Brandon Blossman - Tudor Pickering Holt & Company

Good morning. Let's see any more detail available on what was sold on the met side for '13, it sounds like more than -- for the prepared comments more than the average amount of high-vol B, is that indeed the case? And then what can we think of as far as netbacks to the mine and price at the port in terms of rail transport charges, still seeing some differentials there between high-vol A and lesser grades and should we expect that on a go-forward basis?

Paul Lang

Brandon, this is Paul, I will try and answer your question. I probably won't get too far into the pricing, but I will try and help you on the volume question. We have committed about half of our metallurgical volume for 2013 at an average price of about \$93. If you look at those numbers, these sales were about 60% PCI low-vol B as well as some carryover from 2012. The remainder of the sales was kind of roughly 25% high-vol A and 15% low-vol coals. We have done a good job of maintaining our domestic sales position. And as a rule, we have only our higher quality coal left to sell just kind of round numbers what's left is about 15% low-vol, about 30% high-vol A, and about 55% high-vol B.

John Eaves

Brandon, this is John. On your question on the railroad too, I mean most of the sales that we made on the met side thus far have been domestically. All that transportation is actually contracted with our customer, we're now entering the negotiating season with our international customers where the rail transportation comes more into play. I would say that we have seen the rail roads be pretty proactive in terms of facilitating more thermal and net volumes in the international market.

Brandon Blossman - Tudor Pickering Holt & Company

And then Paul just real quick. PRB cost ranges exactly the same as it was a year ago forecasting basis, lower volumes year-over-year 13 to 12, any expectations, you fell exactly into the middle of that range for 12, is that a fair expectation for 13 and what would move one way or the other?

Paul Lang

As I mentioned in my comments Q4 was the best cash performance for the quarter and the guys did a pretty good job, in the Powder River Basin you know our volumes were down and our cost were up a little bit and we were able to mitigate a lot of that by ideally equipment taking other steps and in the basin we did can't be understated although took care of a short term issue, it should help us going down the road. You know my sense on 2013 is pretty much where we're at, we're expecting the volumes to be about the same and we think with the little uptick in volume we will be able to offset most of the minor inflation everything's that will come along. You know I think there is a lot of positive things on the cost side but you know despite all that I'm definitely not satisfied where we're in controlling cost and you know it will remain our focus for 2013.

Operator

And our next question will come from Mitesh Thakkar of FBR.

Mitesh Thakkar – FBR

My first question is on the Western Bituminous cost, Paul obviously good job during the quarter. When I look at the guidance though, it looks like there is a significant bump not only versus the full year 2012 but meaningfully higher compare to the fourth quarter, what is driving that? If you can kind of give us a bridge on that, that will be great.

John Eaves

All right Mitesh, you know we have an extraordinary cost quarter in Western Bituminous, quarter-over-quarter cash cost went down 22% while the sales volume decreased 18%, the net result was an 18% and 68 per ton cash margin and 13.47 for the year. I don't want to take away anything from great accomplishment by the team but there was some non-recurring items that occurred in the quarter the biggest which of was the run-out of the Dugout Longwall. Obviously we're not forecasting, operating in the Dugout Longwall in 2013 but we're keeping our options open and we really remain encouraged by the market in this region. I guess taking all that into account though we're still forecasting a cash cost of \$24 to \$27.

Mitesh Thakkar – FBR

Okay great and just looking at the contracting, obviously when you do math on the PRB coal it looks like you sold \$15 million - \$16 million tons at around \$10 which is kind of below your cash cost. Can you give us some color about you know what is in there maybe is it a function of mix or like the weak export markets which you talked about, can you talk about the net backs right now on the export side as well?

John Eaves

As we walk our way through this trough you know we remain focused on the longer term opportunities and still view the PRB as a long lived asset that's going to support us for a lot of years. I guess without any apology we took some volume off the table for 2013 and reduced our exposure, so we could run the minds at a reasonable rate. But we also had success at leveraging the 2013 numbers for volume and price in the outer years, for a little more color you know the numbers are weighted down by a couple things, some of its market based agreements, some of it's the blend of 84 and 8800 coal as well as the drop in the international prices. When you think about it the end of January the Indonesian 4900 kilocal coal is in the mid-60s you know about a year ago that was \$80 or \$85.

You know obviously, \$15 or \$20 in the PRB is a huge number and you know we continue to want to pursue these international things and we don't want to be a swing supplier in the trade, but I think if you stand back, I think very positive thing on the pricing is we have seen significant production response to current pricing and that includes Australia and then Indonesia. And I think as we work through our gradual stockpile drops in the PRB at the utilities, we should see some price recovery later in the year. And looking at 2014, we have been able to take this and we are sitting at about 55% or 60% of our thermal position committed based on 2013 guidance. So, I think the strategy is paying off.

Mitesh Thakkar - FBR

Alright, great. And one last follow-up if I may on the Leer mine, have you contracted any coal from Leer and if not what is your expectation in terms of pricing given where the met markets are currently?

John Eaves

Without going into specific pricing, we have not contracted anything, but I wouldn't have expected too either. We are focused on the early production out of the mine going to steelmakers to do test burns to get it into their blend. So, I wouldn't have expected to really sign any term agreements for that operation till next year.

Paul Lang

But we do have some tests going on in the coal that are going well.

Mitesh Thakkar - FBR

Great. Thank you very much guys.

Operator

And our next question will come from Shneur Gershuni of UBS.

Shneur Gershuni - UBS

Good morning guys.

John Eaves

Good morning.

Shneur Gershuni - UBS

Just a very quick follow-up to Mitesh's last question with respect to the PRB cost versus what you have sold, the actual tonnage that you booked was that actually technically done at a loss or just given the fact that their pricing differentials, royalty calculations and so forth and fixed operating leverage that those tons are not actually booked at a loss or close to breakeven, if you can sort of talk about that for a second?

John Drexler

Hey, Shneur you hit on an item that you do have to take into consideration. I think Paul touched on that it can be a variety of factors as we look at each of the individual sales including mix at a 400, at a 800 BTU coal, but another important item that you mentioned as well, the sales sensitive cost impact of what we are looking at. So, a third of the sale price is sales sensitive cost. You need to take that into account into what we report from a cash cost perspective over the course of 2012 with the realizations that we had at that time also. And I think when you adjust for those items you will see that maybe we weren't selling these at a loss in that region.

Shneur Gershuni - UBS

Great. Just two quick questions here, one if we can start with contracting you had mentioned that you have kept some of the better or higher quality met coal back for the market as you expected to move up and so forth. When we think about where benchmark pricing was for metallurgical coal and where you booked the high-vol in PCI for the domestic contract and so forth, was it better than expectations or the relationship between the two was there a contraction or widening of the spread at all kind of how we think about how you contracted those specific tons?

John Eaves

Yeah. I think it was about as expected. I mean, we as Paul indicated a lot of it was weighted down with a high-vol B in PCI. And as we see the international market materialize, we hope that the prices will improve. I mean, we believe right now at the 165 benchmark there is a large percentage of the suppliers in the seaborne market that don't have a cost structure that can play in that market at that price. So, we think you are already seeing kind of moving along the bottom maybe bumping up a little bit if you look at spot prices. So, with the 35 million tons we have seen come out of supply maybe some more coming up versus second quarter, we do think there is a real possibility for prices do respond particularly in the back half of the year. And that's why strategically we tried to manage and maintain more of our high-vol A and low-vol open at this point whereas last year we had committed a higher percentage of that.

Shneur Gershuni - UBS

Great. And just one final question, you have definitely made some great strides with respect to CapEx and so forth. Once Leer is up and running and it looks I assume you don't make any land acquisitions, it sort of seems you are running at about \$170 million maintenance CapEx number. Is that how we should be thinking about 2014 and beyond? And does this low CapEx or maintenance CapEx run-rate impair your ability to ramp up production if you see a pricing uptick?

Paul Lang

Clearly, we are focused on that reduction as well as cost control. And if you look at the (buckets), 2013 maintenance CapEx is about \$170 million. If you recall though in October, we are also getting the benefit this year of about, you could argue a number of \$40 million or \$50 million of equipment that we ideal that some of the minds of the east and we are able to transfer and take advantage of so I think you take that into account, you're looking at kind of a normalized maintenance capital for us next year.

John Eaves

As we think about growth capital once we do have the Leer up and running at steady state we have some land additions which would be LBA and some smaller stuff about \$60 million to \$80 million a year, beyond that it would be just

maintenance capital until we sell some improvement and market that really justified spending more growth capital. We're fortunate though when we think about the next several years of having the (inaudible) value reserve which is just to the west of Leer could be another longwall and another continuous (inaudible) and then we have the big Bakken and the Southern Illinois quarry, those very attractive projects but until we see some improvement in the market the ability to go put some thermal to bed longer term then we're going to kind of sit where we're right now.

Operator

(Operator Instructions). Our next question will come from Brian Yu with Citi.

Brian Yu - Citi

My first question is just on the coal sale, what's the anticipated volumes that you would expect to produce and sell out of Leer this year?

John Eaves

I think we're going to have about a million tons in total.

Brian Yu - Citi

And that would be both production and sales?

Paul Lang

Yes and you know obviously that's going to be very heavily weighted to Q4 when longwall starts up.

Brian Yu - Citi

All right and so if you're doing some development you mentioned you did some test burns now, would that excel your once go into the second and third quarter and then would that be geared towards international markets? Or would you try placing them domestically?

John Drexler

Brian as far as the accounting for some of those sales that occurred during development between now and the startup of the longwall from an accounting perspective those aren't booked through on P&L, those are an adjustment CapEx. That's traditionally in our industry as you develop a longwall, have the accounting for that is. As far as the target for test burns and whether it's domestic or international I will turn that back over to Paul and John.

John Eaves

I clearly say we had a lot of interest particularly in Asia out of this coal and I think I'm just going to have to take a shot but I would say about 70% of what we shift is going to Asia for test burns.

Brian Yu - Citi

Okay and just switching topics on this, on the PCX related tons we took the charge, is any of that, can you provide more detail than to how that may or may not impact your future operating results as you delivering those contracts?

John Drexler

As far as what occurred during the course of the quarter, there was a contract with the customer being serviced from Patriot that ultimately had an obligation of Arch attached to it. We have been very explicit in what our exposure to those contracts has been over the last several years and specifically over the last quarter since the bankruptcy. During the quarter that contract was rejected in bankruptcy so the obligation came back to Arch, the way that specific contract works as it's been amended over the years is it's a required fixed payment schedule between now and 2017 for which we have obligations to make those payments. So once that was rejected in bankruptcy the obligation came back to us.

We recorded the full liability for that amount and will just make ongoing payments between now and 2017, not material to any given here.

Operator

(Operator Instructions). Our next question comes from (inaudible).

Unidentified Analyst

I guess first off it seems like you're getting more encouraged by 2013 on a burn expectation. So when you're looking at that 50 million ton expectation, how much of that do you think will come from new business versus coming from burning down existing stockpile level?

John Eaves

I think it will be a combination, I mean we finished the year at a 182 million tons and you know depending on where you call target levels we think that's you know a good 30 to 40 million tons above normalized levels so some of it's got to come off existing inventories and we will expect you know a draw in January or February but we would expect as the year progresses on that there will be some new business opportunities to sell coal as well, but clearly we need to draw the next 45 to 60 days in the inventory to make that happen, because we go into the (shiver) season. So, I think it will be a combination, but I think the first order business is to pull down the inventories that we ended the year with. So, we see that happening and if we did encounter some mild weather for the next 45 to 60 days, I mean, it's possible that it could delay that, but we are hopeful that we continue to get some cold weather here.

Paul Lang

And I think we are clearly getting a sense from several customers that they are being cautious on their contracting in 2013 and we are going to be careful. And as John said as the burn comes off or the stockpiles come off, I think that will determine what we see later in the year as far as new sales.

John Eaves

Yeah, I mean a lot of these get burned a few years ago and they have been pretty conservative in their buys. And if you did see inventories come down, you actually could see those guys come back to market in the third and fourth quarter and based on pretty heavy buying activity.

Unidentified Analyst

Great, that's very helpful. And I think just following up on that, obviously you have had a lot of changes in your Appalachian thermal footprint over the past year with all the mine closures, what do you think is a good run-rate to think about the actual production in the basin right now? And if we do see the stockpiles get drawn down lot of spot (in these), how long would it take you to ramp up this production capacity and how much could you ramp it up?

John Eaves

Well, I mean, we are going to be very cautious. I mean, we are not going to bring production on for short-term opportunities. We are guiding to 8 to 9 million tons of met. I think you could see a comparable level in the thermal side. I think it just depends on what we see from a market perspective. Paul and his guys were encouraged by what they are seeing on the industrial sector and you saw that reflected in our pricing that we did during the quarter. So, we will see how it goes, but I think if we sell and improve sustained market, there is an opportunity that we could bring on some additional volume back half of the year, but as you know cap as a whole was off about 36 million tons from 11 to 12 and we are forecasting another pretty significant step off in cap as we move into 2013. As I mentioned in my opening comments, if you just take fourth quarter run-rates and annualize them, it's below 130 million tons in Central App, which is pretty significant from where we have been over the last five plus years.

Unidentified Analyst

Great. That's all very helpful.

Operator

Thank you. Ladies and gentlemen, we will take our next question from Jim Rollyson of Raymond James

Jim Rollyson - Raymond James

Good morning everyone.

John Eaves

Jim.

Jim Rollyson - Raymond James

John, going back to that inventory question just when you guys looked in your internal modeling and assuming normal weather, where do you think inventories get down to in that – under normal weather scenario this year and maybe what do you think they need to get down to, to really jump start some opportunity for better pricing?

John Eaves

Jim, as we look at normalized weather we look at natural gas prices kind of where they are now in that mid 3s. Our internal forecast would have it somewhere around 155 plus or minus at the end of this year, which is maybe slightly above normalized levels, but getting much closer and I would say that we have really setup a pretty nice first half in 2014 in terms of buying activity.

Jim Rollyson - Raymond James

And as far as getting back to some sense of pricing, I mean obviously the gas prices to cooperate as well, but what do you think normal levels are today more like it used to be the 140 to 150 as you think that's more like the 130s given reduced burn?

John Eaves

Well, you have had some generation come up obviously, so that number is probably going down a little bit, but I would say it's probably mid-130s to mid-140s range for normalized. I mean, it depends on the customer, but with some of the plant closures we have had thus far, I think that number probably gets a little bit lighter than the old 150 number.

Jim Rollyson - Raymond James

Alright. And as the last follow-up, can you just refresh us maybe how we should think about the cost contribution from the Leer mine, obviously this year you are going to be working on getting it up and running, but as you go forward into next year and get it running at a full run rate, how we think about Leer costs in relation to your overall met costs?

Paul Lang

Jim, what we have been saying and I guess with any new mine you want to be cautious, but what we are saying is the average cost will be in line with our regional average, so I think that's a good number start modeling with.

Operator

And our next question will come from Lucas Pipes of Brean Capital.

Lucas Pipes - Brean Capital

My first question is on potential asset sales, maybe if you could give us an update on kind of what type of assets you're looking at with transportation assets also be considered?

John Eaves

You know as we said in the past and we continue to look at our asset base and we have always been not only buyers of assets but we have been sellers of assets and that's something that we continue to look at. You know I don't want to set the expectation or something that's definitely going to happen but you know if there is an asset it's not necessarily strategic to what we're doing. Somebody could come in and provide value that we don't see certainly something that we're willing to consider. I'll say that we are not in a position where we have to buy or sell assets and will not do that, we're always reviewing our portfolio and making sure that it fits with what we're trying to do. I mean if you look at our diversity, we think we are well positioned in the U.S. with our production based in the PRB, our improved performance in western kind of growing presence in Illinois and then if you look at our almost billion tons that we have in Appalachia which about 40% of that is low cost in that. We do think that we're pretty well positioned, so if there is something in that asset base that didn't fit, we would certainly consider modernization.

Lucas Pipes - Brean Capital

Great and then a quick follow-up question. I mean a lot of prognosticators you see in the U.S. met coal exports are a little bit lower this year. First kind of what is your take on that and then secondly you actually increased your met coal guidance year-over-year, direct back to, first should you expect to take market share from your peers and if so is that result of your cost structure in the basin?

John Eaves

Well I mean obviously 2012 was a big year, on a short term basis we shift a 124 million tons, I mean I think it's too early to say that we're going to be in that level. I mean what we're saying it's going to be a plus 100 million ton market and how the market evolves over the balance of the year will determine where those final numbers shake out.

I wouldn't tell you that based on what we see in global demand, yeah we're bullish longer term, when we look at the new coal fire generation that we see being built around the world to the tune of about 300 gigawatts we think over the next three or four years there is going to be an additional 900 million tons of coal that is going to be required to service that growth and demand and when we look at steel production you know we're forecasting about a 3% increase in steel production from 12 to 13. So we do see some improvement in China. We see some improvement in Europe and a little improvement in South America.

So as a company we want to make sure that we're well positioned to take advantage of those opportunities and here in the U.S, if you listen to some of the auto guys, I mean their forecasting low to mid-15s in terms of units being produced in 2013 which you know translates into a good met market for us. So, you know we're cautiously optimistic and kind of watching the market and we will be selective in taking new business.

Operator

And our next question will come from John Bridges of JPMorgan.

John Bridges – JPMorgan

I wondered if you could give us a bit more detail on the Korean exports you were talking about, is that PRB is it squeezing out to the west coast or is it coming out of the gulf? And is it like going Panamax because I would think the rates would be a bit tight now.

Paul Lang

I will start your question, as we look in Korea, we exported both thermal and metallurgical coal to Korea, the thermal coal obviously came out of the PRB, the met coal came off the east-coast majority of it went through DTA and Curtis Bay.

John Bridges - JPMorgan

And the PRB is going out to the West Coast?

Paul Lang

Yes sir.

John Bridges - JPMorgan

Okay and then just as a follow-up the two draglines that are ideal, this is a really sum how much production would that represent?

Paul Lang

You know John I guess I would rather not go there on specific numbers, you know I think you can just look at our overall guidance and look at our history as to what those volumes would amount to.

Operator

And our next question will come from Kuni Chen of CRT Capital Group.

Kuni Chen - CRT Capital Group

Hey, good morning folks.

John Eaves

Good morning.

Kuni Chen - CRT Capital Group

I guess just first question on the PRB, obviously in the fourth quarter you layered in some tons here to run at an efficient level for 2013, are you basically there already or do you have to layer in perhaps a few more tons in the first half to keep your cost structure within the range?

John Eaves

I guess without citing it specifically, we are sitting at about 90% committed, which is really one of the better positions we have been in a long time. And I think the market outlook and the volumes we have to sell are kind of baked in our guidance. So, I think we have taken it into account.

Kuni Chen - CRT Capital Group

Okay, fair enough. Then I guess just on the Central App, it looks like you committed some tons in the fourth quarter at sort of a high \$70 per ton type of range. Is that something with the mix there? Can you just give us some more color on that?

John Eaves

Yeah. I think there is a little bit of noise I think in those numbers, but what you are seeing is I think what you are seeing particularly in the east is kind of a bit of a combined impact of volume dropping off and gas pushing up the industrial accounts. And some of those customers going back to coal are obviously since we have some higher quality products we have been able to capitalize on this and pick up some of that market segment in otherwise what's been a pretty tepid thermal market. Bottom line is our marketing guys did a good job and these -- what you see is clearly a great effort, but I think the number is probably little high from what you are seeing in the market.

Operator

And our next question will come from David Gagliano with Barclays.

David Gagliano - Barclays

Great, thanks for taking my questions. My first question back on the PRB volumes overpriced in the fourth quarter, I just want to step back for a second even if we assume for example the sales based cost come down in etcetera, etcetera. It looks like it's still the best kind of a breakeven commitment on 16 million tons. So, my question is the obvious question obviously can you just walk us through the logic of why that's better than shutting it down leaving in the ground and then selling it at \$1 or \$2 per ton margin in 2014 for example?

John Eaves

Dave, this is John. A couple of things and Paul touched on I think the fact that we are able to turn that into additional business in '14 and '15 at very attractive prices, I mean, you've just seen '14 we are not showing you '15, but we really have turned it in multi-year business. I think the second piece is that we are trying not to be shortsighted as we look at strategically in terms of our global customer base. And we don't wanted to show up when things get good, we want to make sure that we have established long-term relationships with some of our international customers that we are ready when the market does turn. And we know it's going to turn, because when you look at the new coal, our generation being built around the world we are struggling on where all that supply is going to come from. So, Arch has been very proactive in developing that international customer base. We have been very proactive in going out and getting port capacity. We want to be part of that, because as we look to the U.S. over the next three to five years, I mean, let's face it, I mean demand is going to be pretty flat. And if we are going to grow we have to look at that market and we can't wait a year or two down the road for markets to improve to be part of it. So, I think the marketing guys have done a great job in developing relationships all over Asia, long-term relationships, port relationships that we think will serve us well. And I mean, if yeah, we don't like the prices either, but we do think strategically it's important to do that now versus late.

David Gagliano - Barclays

Okay, I have just a two-part follow-up question. First of all, the midpoint of your full year volume target, it implies another 14 million tons obviously to go, I am assuming that's all in the PRB. It's related to one of the questions earlier. My first part of my question is that how should we think about that? Is that, that's going to be sold at whatever the prices are or is there potential for that to be shut-in? That's my first question. And then my second question along the lines of your commentary, I am just curious over the last 14 years that covered the company like it has changed in terms of the view towards the PRB. This is the same company that for the first 12 years I looked at it 13 years or whatever would consistently say we are not going to sell the coal if it's not at the right price and we will leave it in the ground, what's changed in the last year such that now it's more about maintaining long term relationships et cetera.

John Eaves

Well I think it's both, I mean we always evaluate every transaction and make a decision accordingly and we'll continue to do that. As Paul mentioned we got a lot ideal equipment in the PRB right now that we don't plan on bringing back on until we see sustained demand. But I think what has changed is the marketplace and the marketplace has changed to gear us more to the international market and to establish that market, we got to go out and develop relationships and sell coal and that has you know put us in a position where we have done some of that that we think will serve us well when the market turns. Is it a given that all the uncommitted coal at our met points is going to be sold, no, it's not, I mean we're going to evaluate the market and we will make a decision at the time whether we sell it or we leave that production in ground.

Operator

And our next question will come from David Martin of Deutsche Bank.

David Martin - Deutsche Bank

Was hoping you can give us a little color on the moving parts related to your app cost guidance for 13, is it essentially that had a change in mix you know offsets the benefit of high cost mine curtailments and then I was going to ask about Leer startup cost impacts but I think John you said earlier those don't get reflected in average cost.

John Eaves

Yes from the startup cost impact David you're correct under the accounting those essentially get capitalized into the development of the operation.

Paul Lang

I think just to add a little color, if you look at our cost you know they went up about \$6 compared to 2011 and a lot of that in 2012 will be in 2013 as the shift a higher percentage of metallurgical production. You can garner from the numbers will be about evenly split in 2013 between met and thermal in the east and that's got an obvious cost impact.

David Martin - Deutsche Bank

Okay and then secondly I just wanted to come back to the earlier comments on sales related cost and don't take my question the wrong way. I know I guess what I'm trying to understand is where are those sales related costs are embedded 'cause I look at your for example your SG&A cost guidance and there is really no difference year-over-year.

John Drexler

Yeah David from sales related cost the royalties and taxes that are paid on the sale of coal in any of our regions and any of our operations off loads through the cost of sales line and is considered a cash cost. So as you look at as an example our regional per ton analysis, the sales sensitive costs are part of that cash cost per ton. SG&A is really all corporate overhead related items, anything associated with the sale of that cost is flowing through our income statement on cost of sales and it's reflected in our detail analysis, regional cost analysis and the cash cost per ton.

Operator

And our next question will come from Andre Benjamin of Goldman Sachs.

Andre Benjamin - Goldman Sachs

I was first hoping that maybe clarify how you're thinking about the balance sheet and the use of cash that you built up. I know you have indicated that you like to be capitalized to handle a potentially extended downturn. So should we continue to expect that you'll just hold that cash until the market is stabilizes and then prepay the callable debt or when things stabilize, can we see you turn around and use some of that cash on some of the growth opportunities you have highlighted that target value reserves on the (inaudible) basin.

John Drexler

Clearly as we indicated, we felt it was prudent in the fourth quarter to go and bolster liquidity on the balance sheet for the market downturn and for whatever the extension on that downturn is even if we don't expect it to be prolonged. So right now we're in a position where we're going to be managing to that liquidity closely as indicated in my prepared remarks you know we expect operating cash flows to potentially be below where they were last year so we will watch this closely but as we have indicated over the course of the call we're beginning to see signs of improvement and given the positioning of Arch as things do improve as markets do turn we think the earnings potential cash flow potential is significant, a very primary focus for us once we begin to see that turn we begin to get confidence in those markets moving forward in a very positive way for an extended period of time. We will have the ability then to go and address what we believe is higher leverage than what we would like to have. So, that will be a primary focus for us. However, clearly, wherever the markets are going, we will way the opportunities we have with organic growth projects etcetera, but as we have indicated numerous times, our primary focus will be de-levering as we move forward as the markets do turn.

Operator

(Operator Instructions) Our next question comes from Chris Haberlin of Davenport & Company.

Chris Haberlin - Davenport & Company

Hi, thanks for taking my call.

John Eaves

Hi Chris.

Chris Haberlin - Davenport & Company

You in your release, you talked about consumption, coal consumption increasing this year by approximately 50 million tons and it sounds like you are looking for an inventory drop through the year of 25 million to 30 million tons. So, that kind of leaves sales at 20 million or 25 million tons and how do you – I guess, how do you think that incremental sales volume should be distributed across the major thermal basins in the U.S.?

John Eaves

Well, I think it depends on where gas prices are. I would tell you that with that kind of inventory draw of natural gas prices in the \$3.40, \$3.50 range where we have been seeing we think that the PRB and probably the Western Bit coals will do pretty well. And we are actually seeing that today. If you look at the marketplace both of those coals are dispatching on the curve. And as that inventory comes down, I think the buying activity will only improve and you should see improvements in both the PRB and the Western Bituminous for Arch.

Operator

And our next question will come from Meredith Bandy of BMO Capital Markets.

Meredith Bandy - BMO Capital Markets

Hi guys. So, most of my questions have obviously been asked and answered, but one question I had was in Appalachia in 2014, you gave us new sales guidance there of 1.7 million tons sold at \$53.98. I was just surprised that, that number fell so drastically. When was that sold? Would you see the current market as being – is that indicative of the current market, is the current market better or worse than that?

John Eaves

I believe that, that's some carryover volume that we got through the ICG transaction and that we see the markets better than that in 2014, but that is for the most part carryover from ICG.

Operator

And our next question will come from Justine Fisher of Goldman Sachs.

Justine Fisher - Goldman Sachs

Good morning.

John Eaves

Good morning.

Paul Lang

Good morning Justine.

Justine Fisher - Goldman Sachs

So, my question is on the kind of the production plan given potential outcomes in 2013 and it seems that most of the coal companies are not planning to increase production this year even though we hear a lot of talking about how the second half could be stronger, especially with natural gas. And so I know why you are not, because you have answered to other questions that you don't want to do it until you see a meaningful increase in demand, but the question is how quickly could you bring that tonnage back if you did see meaningful demand? And then also would you or would you just say no, I am sorry we are not going to produce that much and let prices get really higher, do you think that you guys would produce into that higher price environment?

Paul Lang

Well, I think the answer how fast that production could come back depends on the base. In the PRB obviously I think we

are poised very well to respond to whatever the market brings. And obviously we will be very careful. Same in Western Bit, we have the longwall that's idle at Dugout Canyon, and you saw how effective it was in Q4 of 2012. The east, I think is a tougher issue. I think a lot of the production I know the stuff that we shutdown, some of that's not coming back very easily and I think it take a significant market shift for us to even think about the Eastern operations bring back thermal coal.

John Eaves

Yeah, I think you have seen some structural changes in the east. And as to Paul's point, I mean you are going to see a lot of those tons that will not come back and that's why we are optimistic about what's going to happen in the PRB and to a lesser extent maybe Western Bit, and we think as that demand starts to reassert itself, we think that PRB comes into play pretty quickly.

Operator

And we will now move on to Evan Kurtz of Morgan Stanley.

Evan Kurtz - Morgan Stanley

Hi, good morning everyone.

John Eaves

Good morning.

Paul Lang

Good morning.

Evan Kurtz - Morgan Stanley

Just a quick question on met coal, in 2012 what was your split between export tons versus sales of domestic steel mills and how do you see that changing in 2013?

Paul Lang

I think our export in 2012 was 65% thermal and 35% met. My guess is excuse me 2012 – 2013 my guess is the metallurgical volumes will tick up a little bit as compared to the thermal volumes on the export side.

Evan Kurtz - Morgan Stanley

Okay got you and then could you provide me a color perhaps on how domestic met coal contracts ship out this year maybe on a differential from a light quality basis.

John Eaves

I will just say in terms of volume we did a very good job of maintaining our market share and I'm very pleased with where the guy shook out and you know if you look at it, what we did was we took off the table in the domestic market, most of our PCI and lower quality high (inaudible), and obviously that's with the anticipation that the higher quality coals will travel overseas better and garner better prices.

Operator

And we'll take our next question from Lance Ettus of Tuohy Brothers.

Lance Ettus - Tuohy Brothers

Just wanting to know you know on just on the asset sale side, I mean have a lot of I think excess reserves in PRB and also (inaudible) basin, those bases are still viable and you know the only base reserves obviously to wrap your fiber volume properties and maybe that area maybe is considered not core. I guess kind of elaborate more in the potential for selling these assets and you know I guess the interest we're seeing out there maybe we're approaching those assets.

John Eaves

Well I mean we're talking to a number of people as we have and we will continue, I wouldn't I mean in this environment, I think it's pretty challenging to try to monetize assets and again I don't want to talk about any particular region, I do think the Illinois overtime could very well become a core operating region for Arch Coal depending on how we see the market evolve. I mean obviously, we're very bullish on the PRB, you know another area that might be somewhat challenged based on our comments is kind of the east and the way we see the thermal market potentially but you know we will have to evaluate the opportunities we have to monetize assets and see if they meet our needs, if not as I indicated earlier we're not in a situation where we have to buy or sell assets. So somebody is going to have to provide more value than we can provide in order for us to do a transaction.

Operator

And we will take our final question from Dave Katz of JPMorgan.

Dave Katz – JPMorgan

I was just wanting to confirm you guys are still I guess with the amendment that was put through on the credit facility. In November you have the maximum senior secured leverage ratio in 2013 of 3.5 right?

Paul Lang

Correct.

Dave Katz - JPMorgan

And do you anticipate being able to comply with that throughout the year?

John Eaves

We don't anticipate having any concerns with that the other major item there is the minimum liquidity measurement of \$450 million and we feel comfortable with the structure that we have in place.

Operator

And at this time I'll turn the conference back over to John Eaves for any additional or closing remarks.

John Eaves

Thank you. We certainly appreciate you join us today. We feel good about the way we position the company, first of all our safety and environmental performance for 2012 again showed our leadership in that area. Our ability to maintain cost and capital in a low volume environment, our ability to go out and put additional cash on our balance sheet. We think all these things has positioned us very well that continue to weather this storm and be positioned when market does turn and it will turn. So we look forward to updating you in April on our first quarter results. Thank you.

Operator

And that does conclude our teleconference. Thank you all for your participation.

Copyright policy: All transcripts on this site are the copyright of Seeking Alpha. However, we view them as an important resource for bloggers and journalists, and are excited to contribute to the democratization of financial information on the Internet. (Until now investors have had to pay thousands of dollars in subscription fees for transcripts.) So our reproduction policy is as follows: **You may quote up to 400 words of any transcript on the**

condition that you attribute the transcript to Seeking Alpha and either link to the original transcript or to www.SeekingAlpha.com. All other use is prohibited.

THE INFORMATION CONTAINED HERE IS A TEXTUAL REPRESENTATION OF THE APPLICABLE COMPANY'S CONFERENCE CALL, CONFERENCE PRESENTATION OR OTHER AUDIO PRESENTATION, AND WHILE EFFORTS ARE MADE TO PROVIDE AN ACCURATE TRANSCRIPTION, THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORTING OF THE SUBSTANCE OF THE AUDIO PRESENTATIONS. IN NO WAY DOES SEEKING ALPHA ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED ON THIS WEB SITE OR IN ANY TRANSCRIPT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S AUDIO PRESENTATION ITSELF AND THE APPLICABLE COMPANY'S SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

If you have any additional questions about our online transcripts, please contact us at: transcripts@seekingalpha.com. Thank you!

Executives

Jennifer Beatty - Vice President, Investor Relations

John Eaves - President and Chief Executive Officer

Paul Lang - Executive Vice President and Chief Operating Officer

John Drexler - Senior Vice President and Chief Financial Officer

Analysts

Brandon Blossman - Tudor Pickering Holt & Company

Mitesh Thakkar – FBR

Shneur Gershuni - UBS

Brian Yu - Citi

Jim Rollyson - Raymond James

Lucas Pipes – Brean Capital

John Bridges - JPMorgan

Kuni Chen - CRT Capital Group

David Gagliano - Barclays

David Martin - Deutsche Bank

Andre Benjamin - Goldman Sachs

Chris Haberlin - Davenport & Company

Meredith Bandy - BMO Capital Markets

Evan Kurtz - Morgan Stanley

Lance Ettus - Tuohy Brothers

Dave Katz - JPMorgan

Arch Coal, Inc. ([ACI](#)) Q4 2012 Earnings Conference Call February 5, 2013 11:00 AM ET

Operator

Good day, everyone and welcome to this Arch Coal Incorporated Fourth Quarter 2012 Earnings Release Conference Call. Today's call is being recorded. At this time, I would like to turn the call over to Ms. Jennifer Beatty, Vice President of Investor Relations. Please go ahead.

[Jennifer Beatty](#) - Vice President, Investor Relations

Good morning from St. Louis. Thanks for joining us today. Before we begin, let me remind you that certain statements made during this call, including statements relating to our expected future business and financial performance may be considered forward-looking statements, according to the Private Securities Litigation Reform Act. Forward-looking statements by their nature address matters that are to different degrees uncertain.

These uncertainties, which are described in more detail in the annual and quarterly reports that we file with the Securities and Exchange Commission may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. I would also like to remind you that you can find a reconciliation of the non-GAAP financial measures that we plan to discuss this morning at the end of our press release, a copy of which we have posted in the Investor section of our website at [archcoal.com](#).

On the call this morning we have John Eaves, Arch's President and CEO; Paul Lang, Arch's Executive Vice President and COO; and John Drexler, our Senior Vice President and CFO. John, Paul and John will begin the call with some brief formal remarks, and thereafter, we will be happy to take your questions. John?

[John Eaves](#) - President and Chief Executive Officer

Good morning everyone. Today, I'd like to spend a few moments highlighting milestones that Arch achieved in 2012 despite the market downturn we have been facing. Last year, Arch generated \$688 million in EBITDA. As 2012 unfolded, it became clear that we were going to see a contraction versus 2011 thus we began cutting our capital spending significantly. As a result, we ended the year in only slightly negative territory for free cash flow even if we are moving ahead on the Leer mine development.

We also successfully bolstered our cash and liquidity resources in 2012 to write out the storm and to emerge as even stronger players when market recovers. John Drexler will highlight those financing initiatives in his prepared remarks. Of course, one of the most important milestones that Arch achieved in 2012 was another strong performance in safety and environmental stewardship. For the seventh year in a row, we ranked first among our major diversified coal peer for our safety record and garnered 24 external awards for outstanding achievement in our core values. In addition, five of our complexes completed 2012 without a single safety incident or environmental violation. What's more, we advanced the build out of our low-cost high-quality metallurgical coal platform in Appalachia and held the line on cost in other regions. We believe the addition of Leer will further enhance our competitive position within the industry and will serve us well in the coming market up-cycle.

Lastly, we are building momentum in the seaborne coal markets. Our exports hit a record 13.6 million tons in 2012, that's a fourfold increase since 2009. We sent met and thermal coal to Europe and South America and to new places in the Middle East and Asia. Our top destination for exports in 2012 was South Korea. Our increased participation in the seaborne coal trade reflects the growing worldwide consumption of coal as well as the strengthening of Arch's position in the competitive landscape. With our low-cost operations and growing port access, we are well-positioned to benefit from the changing dynamics in the seaborne market. We see exports as a long-term development opportunity as a way to diversify our customer base and as a way to unlock further value for our reserves. Growth overseas will also help offset our expectation for a relatively flat coal use here at home.

While these international netback prices don't always offer a substantial return today, we believe prices will rebound as market fundamentals improve. In fact, we continue to field enquires about shipping our coal overseas and are building new business in this rapidly growing arena. That's why we think U.S. exports will continue at elevated levels and certainly exceed 100 million tons in 2013 whether we approach the record levels achieved in 2012 remains to be seen and we'll ultimately be dependent on the evolution of coal markets throughout the year.

Turning now to discussion of coal market fundamentals, 2012 could well prove to be at the trough. Global benchmark metallurgical prices declined 50% since their peak a year and a half ago while U.S. thermal coal consumption declined to levels we haven't seen since the mid-90s. Needed economic activity, unseasonably warm weather and low natural gas prices all converge to dampen coal demand, causing coal stockpiles to grow to near record levels by May of last year. However we're encouraged to see stabilization in the back half of 2012 based upon these dynamics we believe that we're moving up the bottom as we head into 2013. Net coal markets are beginning to show some signs of life, inquiries that were non-existent six months ago are emerging. Utilization of steel mills is improving and China's economy seems to be picking up.

On the supply side production cuts and constraints are beginning to take hold and should start to have a greater impact as the year progresses. Thermal coal markets appear poised for better days as well while winter weather has not been very cold, it has been better than last year. So far this season heating degree days are up 5%, we estimate coal stockpiles into 2012 in a 182 million tons well below the peak from last May but about 10 million tons higher than they were at the end of 2011. Thus we expect to exit this winter season with coal inventories above normal but are forecasting draw downs in January and February.

That's still a lot better than the 30 million ton build we had from last winter. In addition prices for natural gas are high enough to give western coals an economic advantage on the dispatch curve. At the same time we believe that natural gas prices were unsustainably low today as companies cannot make sufficient returns to justify continued investment as evidenced by the rig count decline.

Overtime we expect market forces to move gas prices higher which further boaster coals competitiveness in the power sector. We also believe that coal that U.S. generators enter 2013 with conservative burn forecast and could potentially fund themselves needing coal as the year progresses. This development should initially help to reduce the stockpile overhang that could eventually lead to more active and dynamic market in the second half of the year and into 2014. One area that's definitely helping to turn coal markets around the supply shut-outs.

The higher estimates, net coal supply cuts, totaled nearly 35 million metric tons annualized. On the thermal side the cuts are even larger. According to recent industry data the U.S. coal industry reduced production by nearly 80 million tons in 2012. PRB led the way with 38 million tons of volume reductions and Central App was close behind with a decline of 36 million tons.

In fact, Central App, produced just a 148 million tons in 2012 but even more striking is fourth quarter run rate is below a 130 million tons annualized. For 2013, we expect global supply to fall further as high price contracts roll-up, trader inventories liquidate and the higher cost supply exists the market altogether. These trends should help rebalance supply and demand as the year progresses, setting the backdrop for a reason. In closing I want to reiterate, whereas it's never found at the bottom of the market cycle we as a company had been here before and we know what it takes to manage through the trouble so we're ready to capitalize on the market rebound.

Underlying fundamentals and begin to improve first and our financial results will follow. In the meantime we'll continue executing the strategy, it has allowed us to mitigate the headwinds that we have been facing.

We'll stay focused on what we can control, capital spending, cost and commitments. We'll also look for ways to optimize our portfolio and won't roll-out further curtailments or divestitures as we focus on unlocking value for assets. With that in mind, I'll now turn the call over to our COO, Paul Lang for discussion of Arch's recent operating performance and outlook for 2013. Paul?

Paul Lang - Executive Vice President and Chief Operating Officer

As John mentioned I would like to highlight our continued focus areas in 2013, these are keeping our cash cost and capital spending levels low and continue to strength our sales commitment portfolio. In the fourth quarter our overall cash cost per ton declined from the third quarter levels and represented our best quarterly performance of the year. Driving these results was an exceptional fourth quarter performance in our Western by bituminous region which helped offset higher planned maintenance expense in the Powder River Basin. For full year 2012 we held the line on cost in all of our operating regions, this was a notable accomplishment when you consider how significantly we reduced production over the course of the year as you know spreading highly fixed cost over lower volume effects unit cost and that is reflected in our operating performance in 2012.

In our largest volume region, the Powder River Basin our cash cost in 2012 were up 7% year-over-year while our sales volume declined 11%. We proactively mitigated the impact of the weak coal market by adding equipment and took other steps that contain cost. During the downturn, we stepped up our reclamation efforts and received the benefit of

completing this work faster and add lower costs than we have been incurred with contractors. Our efforts will also allow us to sequence future reclamation work with greater flexibility. Going forward, the demand outlook for this region is expected to improve, but at this time, we have two draglines and eight shovels as well as their related support equipment idle at our operations. As domestic supply overhang corrects, we expect to deploy this equipment and recapture some of the loss volume which will benefit our cost structure over time.

In our Western Bituminous region, we successfully reduced our cash cost per ton year-over-year despite running at lower volume levels in 2012. Late in 2011, we significantly restructured our operating profile in the region by reducing production out of our Dugout Canyon mine and shifting volumes to other lower cost mines. We also transitioned to a new mining area at our Skyline mine in the fourth quarter of 2012 successfully completing a major transition of that operation. Looking ahead, we are optimistic about the market for Western Bituminous coal, we are seeing a slight pickup in domestic demand due to improvements in the construction sector and higher natural gas prices. In addition, export opportunities are improving for this region and should increase further as port capacity materially expands in 2014.

In Appalachia, our sales volume declined in 2012 as expected with our portfolio realignment in the region. During the year, we closed 10 higher cost thermal and incremental metallurgical operations. We decreased production at other active operations and we've reduced our overall workforce by nearly 17%.

Our overall cash cost per ton increased in Appalachia during 2012 which is consistent with our ongoing shift to a higher metallurgical coal output. Even with this cost increase, our Appalachian segment represents for the lowest cost operating profiles in the region. Looking ahead, we continue to optimize our assets in Appalachia and anchor our thermal production at our lowest cost asset coal met mine. Our metallurgical platform will consist of our lowest cost mine, Mountain Laurel along with operations producing higher quality coal such as Beckley and Sentinel.

As John mentioned, our coking coal profile will further be enhanced by the addition of the Leer mine as that operation reach full production in 2014, we project its cost structure will be in line with our overall average for the region. In the fourth quarter, we have continued to make solid progress on the development of the Leer mine and we completed the slope construction in December. We have also started the process of test marketing the coal with steelmakers in North America, Europe and Asia. Just like Mountain Laurel, we believe Leer will be a sought-after premium brand in its category, given its large reserve base, good cost structure, and homogenous quality. We also recognized that it takes times for steelmakers to introduce new coals into their blends. Currently, we expect the longwall at Leer to startup sometime during the third quarter and continue to monitor the state of the coking coal markets closely.

Turning now to capital spending, we have cut about \$200 million that of our capital plan since 2011 and our actual spend in 2012 came in \$25 million favorable to the target. For 2013, we expect capital spending of \$350 million or less. That level allows us to adequately maintain our existing operation and still that suspend on value-enhancing projects, including the Leer development as well as the replenishment of our reserve base.

Lastly, I want to touch on our sales commitments. On the metallurgical side, we sold 7.5 million tons at an average price of \$113 per ton in 2012. We are targeting higher sales in 2013 mainly due to incremental volumes from Leer. At the same time, our product mix is improving. In 2013, 40% of our metallurgical sales should be a blend of low-vol and high-vol A coal, and we expect that percentage increase in the future. To give this change on context, our product mix is already up from roughly 33% of low-vol and high-vol A in 2012, and it was less than 20% in 2011. We are not only producing more metallurgical coal, but we are producing a higher quality product mix.

We have booked nearly half of our targeted metallurgical sales in 2013 in an average price of \$93 a ton while that pricing is lower than what we garnered in 2012, it reflects the higher blend of high well-being in PCI sales than we had last year as well as some carry over volume. For 2013, we've strategically left open a larger percentage of our higher quality brand such as Beckley. Although international prices are low at the moment, we expect those markets will strengthen as we progress through 2013 and remain optimistic about to play some of those products both domestically and overseas. While on the thermal side we've layered in some sales to run our mind efficiently in 2013 while continuing to produce a slight significantly reduced volume levels. We're roughly 90% committed based on the mid-point of our guidance range and have maintained sales leverage where we believe opportunities will present themselves over the course of the year.

As discussed we're encouraged by what we're seeing in the domestic and international arena for Western Bituminous coals and in Appalachia the domestic industrial sector remain solid which is helping to provide an offset to soft thermal markets in the region.

In the Powder River Basin, we placed some business in 2013 for both 8800 and 8400 coals that will reduce our sales

exposure in near term and position us to operate our minds more steadily. We've also leveraged those sales throughout the year commitments at more attractive prices and have retained a productive to significantly benefit from improving market fundamentals. While our sales profile in 2013 will likely be waived down by lower realized prices on export sales we continue to pursue key contracts to fulfill our longer term strategic goal increasing our stake in the seaborne coal trade.

As John noted South Korea is the single largest country, we did business with on the international front in 2012. We believe this relationship will continue to grow as country builds out a coal generation fleet that is designed burned sub-bituminous coal with its consistent quality, high reliability and extensive reserve base, the Powder River Basin will increasingly play a larger role in Korea as well as the broader Asia-Pacific region.

With that I'll now turn the call over to John Drexler, Arch's CFO to provide an update on our consolidated financial results and liquidity position. John?

[John Drexler](#) - Senior Vice President and Chief Financial Officer

Thank you Paul. As John and Paul have described we're beginning to see some signs of improvement in coal markets, however the timing and magnitude of a recovery remain uncertain. This reality is what prompted us to undertake the financing transactions that we completed in the fourth quarter. We increased our cash on hand by nearly \$370 million and decreased our short term borrowings by 100 million. At the end of 2012 we had cash and short term investments of just over \$1 billion and no borrowings under our credit facilities. Our available liquidity totaled 1.4 billion at December 31 which was up \$400 million compared to the third quarter. Following these strategic moves we're in a very strong liquidity position with the majority of our liquidity in the form of cash. In addition, these transactions relax the financial maintenance covenants in our revolving credit facility creating ample financial flexibility to manage through the market headwinds.

Although we don't expect the current cycle to be prolonged, we're prepared for that contingency. We have a structure in place that will allow us to fund our operations and our ongoing growth plans with (inaudible). While aggressively allowing us to pay down debt as market fundamentals improve. Turning to our quarterly results, Arch reported adjusted EBITDA of \$71 million for the three months ended December 31. These results were impacted by a \$58 million charge or \$0.17 per share that reflects the rejection of a customer supply contract by the U.S. bankruptcy court and the assumption of the contract obligation by Arch. Absent the charge EBITDA would have been \$130 million. Other notable items in the quarter's results were intangible asset impairment charges totally \$231 million or \$0.97 per share. With the vast majority of VAT charge related to goodwill. We're required to perform a goodwill impairment review on an annual basis or as conditions warrant. The results of our testing indicated that a portion of our goodwill was impaired mainly due to the material decline and benchmark metallurgical coal prices.

This one-time non-cash charge did not impact our cash flows, liquidity, our on-going business operations. Income taxes for the fourth quarter included a charge of \$24 million or \$0.11 per share to increase the valuation allowance for certain state net operating loss carry-forwards. Our evaluation of our deferred tax assets indicated that these loss carry-forwards were likely not recoverable requiring them to be written off.

Finally, the income statement line for coal derivative and trading activity reflects an expense of \$13 million in the fourth quarter. As I discussed on the third quarter call, this paper loss was primarily due to the expiration of in the money API-2 swap position that we entered into to hedge the price of export shipments. The cash income we received from the settlement of those positions more than offsets that loss, but for reporting purposes, the corresponding income is reported under the other operating income lines.

Lastly, I'd like to discuss our guidance for 2013. We expect thermal sales volumes in the range of 125 million to 135 million tons with met sales in the range of 8 million to 9 million tons. Cash cost in the range of \$10.75 to \$11.50 per ton in the Powder River Basin; cash cost between \$24 and \$27 per ton in the Western Bituminous region; cash cost of \$66 to \$72 per ton in Appalachia; and cash cost of \$34 to \$36 per ton in the Illinois Basin. DD&A in the range of \$510 million to \$540 million, SG&A in the range of \$130 million to \$140 million, interest expense between \$360 million and \$370 million, and capital expenditures of \$330 million to \$360 million. Given our current outlook and the impact of percentage depletion, we expect the tax benefit in the range of 30% to 50%.

Our guidance assumes that we will continue to manage cost and capital in 2013 as we successfully did in 2012. Depending on the trajectory of markets during the course of 2013, it is likely that our operating cash flows will be below that of last year. We will continue to work towards improving cash flows for the year from continued expense reduction and ongoing capital discipline to even more stringent working capital management to asset divestitures. We are confident that Arch is well-positioned to weather this downturn and to outperform and create substantial shareholder

value as market conditions improve.

With that, we are ready to take questions. Operator, I will turn the call back over to you.

Question-and-Answer Session

Operator

Thank you. (Operator Instructions) And our first question will come from Brandon Blossman of Tudor Pickering Holt & Company.

[Brandon Blossman](#) - Tudor Pickering Holt & Company

Good morning. Let's see any more detail available on what was sold on the met side for '13, it sounds like more than -- for the prepared comments more than the average amount of high-vol B, is that indeed the case? And then what can we think of as far as netbacks to the mine and price at the port in terms of rail transport charges, still seeing some differentials there between high-vol A and lesser grades and should we expect that on a go-forward basis?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Brandon, this is Paul, I will try and answer your question. I probably won't get too far into the pricing, but I will try and help you on the volume question. We have committed about half of our metallurgical volume for 2013 at an average price of about \$93. If you look at those numbers, these sales were about 60% PCI low-vol B as well as some carryover from 2012. The remainder of the sales was kind of roughly 25% high-vol A and 15% low-vol coals. We have done a good job of maintaining our domestic sales position. And as a rule, we have only our higher quality coal left to sell just kind of round numbers what's left is about 15% low-vol, about 30% high-vol A, and about 55% high-vol B.

[John Eaves](#) - President and Chief Executive Officer

Brandon, this is John. On your question on the railroad too, I mean most of the sales that we made on the met side thus far have been domestically. All that transportation is actually contracted with our customer, we're now entering the negotiating season with our international customers where the rail transportation comes more into play. I would say that we have seen the rail roads be pretty proactive in terms of facilitating more thermal and net volumes in the international market.

[Brandon Blossman](#) - Tudor Pickering Holt & Company

And then Paul just real quick. PRB cost ranges exactly the same as it was a year ago forecasting basis, lower volumes year-over-year 13 to 12, any expectations, you fell exactly into the middle of that range for 12, is that a fair expectation for 13 and what would move one way or the other?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

As I mentioned in my comments Q4 was the best cash performance for the quarter and the guys did a pretty good job, in the Powder River Basin you know our volumes were down and our cost were up a little bit and we were able to mitigate a lot of that by ideally equipment taking other steps and in the basin we did can't be understated although took care of a short term issue, it should help us going down the road. You know my sense on 2013 is pretty much where we're at, we're expecting the volumes to be about the same and we think with the little uptick in volume we will be able to offset most of the minor inflation everything's that will come along. You know I think there is a lot of positive things on the cost side but you know despite all that I'm definitely not satisfied where we're in controlling cost and you know it will remain our focus for 2013.

Operator

And our next question will come from Mitesh Thakkar of FBR.

[Mitesh Thakkar](#) - FBR

My first question is on the Western Bituminous cost, Paul obviously good job during the quarter. When I look at the guidance though, it looks like there is a significant bump not only versus the full year 2012 but meaningfully higher compare to the fourth quarter, what is driving that? If you can kind of give us a bridge on that, that will be great.

[John Eaves](#) - President and Chief Executive Officer

All right Mitesh, you know we have an extraordinary cost quarter in Western Bituminous, quarter-over-quarter cash cost went down 22% while the sales volume decreased 18%, the net result was an 18% and 68 per ton cash margin and 13.47 for the year. I don't want to take away anything from great accomplishment by the team but there was some non-recurring items that occurred in the quarter the biggest which of was the run-out of the Dugout Longwall. Obviously we're not forecasting, operating in the Dugout Longwall in 2013 but we're keeping our options open and we really remain encouraged by the market in this region. I guess taking all that into account though we're still forecasting a cash cost of \$24 to \$27.

[Mitesh Thakkar](#) - FBR

Okay great and just looking at the contracting, obviously when you do math on the PRB coal it looks like you sold \$15 million - \$16 million tons at around \$10 which is kind of below your cash cost. Can you give us some color about you know what is in there maybe is it a function of mix or like the weak export markets which you talked about, can you talk about the net backs right now on the export side as well?

[John Eaves](#) - President and Chief Executive Officer

As we walk our way through this trough you know we remain focused on the longer term opportunities and still view the PRB as a long lived asset that's going to support us for a lot of years. I guess without any apology we took some volume off the table for 2013 and reduced our exposure, so we could run the minds at a reasonable rate. But we also had success at leveraging the 2013 numbers for volume and price in the outer years, for a little more color you know the numbers are weighted down by a couple things, some of its market based agreements, some of it's the blend of 84 and 8800 coal as well as the drop in the international prices. When you think about it the end of January the Indonesian 4900 kilocal coal is in the mid-60s you know about a year ago that was \$80 or \$85.

You know obviously, \$15 or \$20 in the PRB is a huge number and you know we continue to want to pursue these international things and we don't want to be a swing supplier in the trade, but I think if you stand back, I think very positive thing on the pricing is we have seen significant production response to current pricing and that includes Australia and then Indonesia. And I think as we work through our gradual stockpile drops in the PRB at the utilities, we should see some price recovery later in the year. And looking at 2014, we have been able to take this and we are sitting at about 55% or 60% of our thermal position committed based on 2013 guidance. So, I think the strategy is paying off.

[Mitesh Thakkar](#) - FBR

Alright, great. And one last follow-up if I may on the Leer mine, have you contracted any coal from Leer and if not what is your expectation in terms of pricing given where the met markets are currently?

[John Eaves](#) - President and Chief Executive Officer

Without going into specific pricing, we have not contracted anything, but I wouldn't have expected too either. We are focused on the early production out of the mine going to steelmakers to do test burns to get it into their blend. So, I wouldn't have expected to really sign any term agreements for that operation till next year.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

But we do have some tests going on in the coal that are going well.

[Mitesh Thakkar](#) - FBR

Great. Thank you very much guys.

Operator

And our next question will come from Shneur Gershuni of UBS.

[Shneur Gershuni](#) - UBS

Good morning guys.

[John Eaves](#) - President and Chief Executive Officer

Good morning.

[Shneur Gershuni](#) - UBS

Just a very quick follow-up to Mitesh's last question with respect to the PRB cost versus what you have sold, the actual tonnage that you booked was that actually technically done at a loss or just given the fact that their pricing differentials, royalty calculations and so forth and fixed operating leverage that those tons are not actually booked at a loss or close to breakeven, if you can sort of talk about that for a second?

[John Drexler](#) - Senior Vice President and Chief Financial Officer

Hey, Shneur you hit on an item that you do have to take into consideration. I think Paul touched on that it can be a variety of factors as we look at each of the individual sales including mix at a 400, at a 800 BTU coal, but another important item that you mentioned as well, the sales sensitive cost impact of what we are looking at. So, a third of the sale price is sales sensitive cost. You need to take that into account into what we report from a cash cost perspective over the course of 2012 with the realizations that we had at that time also. And I think when you adjust for those items you will see that maybe we weren't selling these at a loss in that region.

[Shneur Gershuni](#) - UBS

Great. Just two quick questions here, one if we can start with contracting you had mentioned that you have kept some of the better or higher quality met coal back for the market as you expected to move up and so forth. When we think about where benchmark pricing was for metallurgical coal and where you booked the high-vol in PCI for the domestic contract and so forth, was it better than expectations or the relationship between the two was there a contraction or widening of the spread at all kind of how we think about how you contracted those specific tons?

[John Eaves](#) - President and Chief Executive Officer

Yeah. I think it was about as expected. I mean, we as Paul indicated a lot of it was weighted down with a high-vol B in PCI. And as we see the international market materialize, we hope that the prices will improve. I mean, we believe right now at the 165 benchmark there is a large percentage of the suppliers in the seaborne market that don't have a cost structure that can play in that market at that price. So, we think you are already seeing kind of moving along the bottom maybe bumping up a little bit if you look at spot prices. So, with the 35 million tons we have seen come out of supply maybe some more coming up versus second quarter, we do think there is a real possibility for prices do respond particularly in the back half of the year. And that's why strategically we tried to manage and maintain more of our high-vol A and low-vol open at this point whereas last year we had committed a higher percentage of that.

[Shneur Gershuni](#) - UBS

Great. And just one final question, you have definitely made some great strides with respect to CapEx and so forth. Once Leer is up and running and it looks I assume you don't make any land acquisitions, it sort of seems you are running at about \$170 million maintenance CapEx number. Is that how we should be thinking about 2014 and beyond? And does this low CapEx or maintenance CapEx run-rate impair your ability to ramp up production if you see a pricing uptick?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Clearly, we are focused on that reduction as well as cost control. And if you look at the (buckets), 2013 maintenance CapEx is about \$170 million. If you recall though in October, we are also getting the benefit this year of about, you could argue a number of \$40 million or \$50 million of equipment that we ideal that some of the minds of the east and we are able to transfer and take advantage of so I think you take that into account, you're looking at kind of a normalized

maintenance capital for us next year.

[John Eaves](#) - President and Chief Executive Officer

As we think about growth capital once we do have the Leer up and running at steady state we have some land additions which would be LBA and some smaller stuff about \$60 million to \$80 million a year, beyond that it would be just maintenance capital until we sell some improvement and market that really justified spending more growth capital. We're fortunate though when we think about the next several years of having the (inaudible) value reserve which is just to the west of Leer could be another longwall and another continuous (inaudible) and then we have the big Bakken and the Southern Illinois quarry, those very attractive projects but until we see some improvement in the market the ability to put some thermal to bed longer term then we're going to kind of sit where we're right now.

Operator

(Operator Instructions). Our next question will come from Brian Yu with Citi.

[Brian Yu](#) - Citi

My first question is just on the coal sale, what's the anticipated volumes that you would expect to produce and sell out of Leer this year?

[John Eaves](#) - President and Chief Executive Officer

I think we're going to have about a million tons in total.

[Brian Yu](#) - Citi

And that would be both production and sales?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Yes and you know obviously that's going to be very heavily weighted to Q4 when longwall starts up.

[Brian Yu](#) - Citi

All right and so if you're doing some development you mentioned you did some test burns now, would that excel your once go into the second and third quarter and then would that be geared towards international markets? Or would you try placing them domestically?

[John Drexler](#) - Senior Vice President and Chief Financial Officer

Brian as far as the accounting for some of those sales that occurred during development between now and the startup of the longwall from an accounting perspective those aren't booked through on P&L, those are an adjustment CapEx. That's traditionally in our industry as you develop a longwall, have the accounting for that is. As far as the target for test burns and whether it's domestic or international I will turn that back over to Paul and John.

[John Eaves](#) - President and Chief Executive Officer

I clearly say we had a lot of interest particularly in Asia out of this coal and I think I'm just going to have to take a shot but I would say about 70% of what we shift is going to Asia for test burns.

[Brian Yu](#) - Citi

Okay and just switching topics on this, on the PCX related tons we took the charge, is any of that, can you provide more detail than to how that may or may not impact your future operating results as you delivering those contracts?

[John Drexler](#) - Senior Vice President and Chief Financial Officer

As far as what occurred during the course of the quarter, there was a contract with the customer being serviced from Patriot that ultimately had an obligation of Arch attached to it. We have been very explicit in what our exposure to those contracts has been over the last several years and specifically over the last quarter since the bankruptcy. During the quarter that contract was rejected in bankruptcy so the obligation came back to Arch, the way that specific contract works as it's been amended over the years is it's a required fixed payment schedule between now and 2017 for which we have obligations to make those payments. So once that was rejected in bankruptcy the obligation came back to us. We recorded the full liability for that amount and will just make ongoing payments between now and 2017, not material to any given here.

Operator

(Operator Instructions). Our next question comes from (inaudible).

Unidentified Analyst

I guess first off it seems like you're getting more encouraged by 2013 on a burn expectation. So when you're looking at that 50 million ton expectation, how much of that do you think will come from new business versus coming from burning down existing stockpile level?

[John Eaves](#) - President and Chief Executive Officer

I think it will be a combination, I mean we finished the year at a 182 million tons and you know depending on where you call target levels we think that's you know a good 30 to 40 million tons above normalized levels so some of it's got to come off existing inventories and we will expect you know a draw in January or February but we would expect as the year progresses on that there will be some new business opportunities to sell coal as well, but clearly we need to draw the next 45 to 60 days in the inventory to make that happen, because we go into the (shiver) season. So, I think it will be a combination, but I think the first order business is to pull down the inventories that we ended the year with. So, we see that happening and if we did encounter some mild weather for the next 45 to 60 days, I mean, it's possible that it could delay that, but we are hopeful that we continue to get some cold weather here.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

And I think we are clearly getting a sense from several customers that they are being cautious on their contracting in 2013 and we are going to be careful. And as John said as the burn comes off or the stockpiles come off, I think that will determine what we see later in the year as far as new sales.

[John Eaves](#) - President and Chief Executive Officer

Yeah, I mean a lot of these get burned a few years ago and they have been pretty conservative in their buys. And if you did see inventories come down, you actually could see those guys come back to market in the third and fourth quarter and based on pretty heavy buying activity.

Unidentified Analyst

Great, that's very helpful. And I think just following up on that, obviously you have had a lot of changes in your Appalachian thermal footprint over the past year with all the mine closures, what do you think is a good run-rate to think about the actual production in the basin right now? And if we do see the stockpiles get drawn down lot of spot (in these), how long would it take you to ramp up this production capacity and how much could you ramp it up?

[John Eaves](#) - President and Chief Executive Officer

Well, I mean, we are going to be very cautious. I mean, we are not going to bring production on for short-term opportunities. We are guiding to 8 to 9 million tons of met. I think you could see a comparable level in the thermal side. I think it just depends on what we see from a market perspective. Paul and his guys were encouraged by what they are seeing on the industrial sector and you saw that reflected in our pricing that we did during the quarter. So, we will see how it goes, but I think if we sell and improve sustained market, there is an opportunity that we could bring on some additional volume back half of the year, but as you know cap as a whole was off about 36 million tons from 11 to 12 and we are forecasting another pretty significant step off in cap as we move into 2013. As I mentioned in my opening comments, if you just take fourth quarter run-rates and annualize them, it's below 130 million tons in Central App, which is pretty significant from where we have been over the last five plus years.

Unidentified Analyst

Great. That's all very helpful.

Operator

Thank you. Ladies and gentlemen, we will take our next question from Jim Rollyson of Raymond James

[Jim Rollyson](#) - Raymond James

Good morning everyone.

[John Eaves](#) - President and Chief Executive Officer

Jim.

[Jim Rollyson](#) - Raymond James

John, going back to that inventory question just when you guys looked in your internal modeling and assuming normal weather, where do you think inventories get down to in that – under normal weather scenario this year and maybe what do you think they need to get down to, to really jump start some opportunity for better pricing?

[John Eaves](#) - President and Chief Executive Officer

Jim, as we look at normalized weather we look at natural gas prices kind of where they are now in that mid 3s. Our internal forecast would have it somewhere around 155 plus or minus at the end of this year, which is maybe slightly above normalized levels, but getting much closer and I would say that we have really setup a pretty nice first half in 2014 in terms of buying activity.

[Jim Rollyson](#) - Raymond James

And as far as getting back to some sense of pricing, I mean obviously the gas prices to cooperate as well, but what do you think normal levels are today more like it used to be the 140 to 150 as you think that's more like the 130s given reduced burn?

[John Eaves](#) - President and Chief Executive Officer

Well, you have had some generation come up obviously, so that number is probably going down a little bit, but I would say it's probably mid-130s to mid-140s range for normalized. I mean, it depends on the customer, but with some of the plant closures we have had thus far, I think that number probably gets a little bit lighter than the old 150 number.

[Jim Rollyson](#) - Raymond James

Alright. And as the last follow-up, can you just refresh us maybe how we should think about the cost contribution from the Leer mine, obviously this year you are going to be working on getting it up and running, but as you go forward into next year and get it running at a full run rate, how we think about Leer costs in relation to your overall met costs?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Jim, what we have been saying and I guess with any new mine you want to be cautious, but what we are saying is the average cost will be in line with our regional average, so I think that's a good number start modeling with.

Operator

And our next question will come from Lucas Pipes of Brean Capital.

[Lucas Pipes](#) - Brean Capital

My first question is on potential asset sales, maybe if you could give us an update on kind of what type of assets you're looking at with transportation assets also be considered?

[John Eaves](#) - President and Chief Executive Officer

You know as we said in the past and we continue to look at our asset base and we have always been not only buyers of assets but we have been sellers of assets and that's something that we continue to look at. You know I don't want to set the expectation or something that's definitely going to happen but you know if there is an asset it's not necessarily strategic to what we're doing. Somebody could come in and provide value that we don't see certainly something that we're willing to consider. I'll say that we are not in a position where we have to buy or sell assets and will not do that, we're always reviewing our portfolio and making sure that it fits with what we're trying to do. I mean if you look at our diversity, we think we are well positioned in the U.S. with our production based in the PRB, our improved performance in western kind of growing presence in Illinois and then if you look at our almost billion tons that we have in Appalachia which about 40% of that is low cost in that. We do think that we're pretty well positioned, so if there is something in that asset base that didn't fit, we would certainly consider modernization.

[Lucas Pipes](#) - Brean Capital

Great and then a quick follow-up question. I mean a lot of prognosticators you see in the U.S. met coal exports are a little bit lower this year. First kind of what is your take on that and then secondly you actually increased your met coal guidance year-over-year, direct back to, first should you expect to take market share from your peers and if so is that result of your cost structure in the basin?

[John Eaves](#) - President and Chief Executive Officer

Well I mean obviously 2012 was a big year, on a short term basis we shift a 124 million tons, I mean I think it's too early to say that we're going to be in that level. I mean what we're saying it's going to be a plus 100 million ton market and how the market evolves over the balance of the year will determine where those final numbers shake out.

I wouldn't tell you that based on what we see in global demand, yeah we're bullish longer term, when we look at the new coal fire generation that we see being built around the world to the tune of about 300 gigawatts we think over the next three or four years there is going to be an additional 900 million tons of coal that is going to be required to service that growth and demand and when we look at steel production you know we're forecasting about a 3% increase in steel production from 12 to 13. So we do see some improvement in China. We see some improvement in Europe and a little improvement in South America.

So as a company we want to make sure that we're well positioned to take advantage of those opportunities and here in the U.S, if you listen to some of the auto guys, I mean their forecasting low to mid-15s in terms of units being produced in 2013 which you know translates into a good met market for us. So, you know we're cautiously optimistic and kind of watching the market and we will be selective in taking new business.

Operator

And our next question will come from John Bridges of JPMorgan.

[John Bridges](#) - JPMorgan

I wondered if you could give us a bit more detail on the Korean exports you were talking about, is that PRB is it squeezing out to the west coast or is it coming out of the gulf? And is it like going Panamax because I would think the rates would be a bit tight now.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

I will start your question, as we look in Korea, we exported both thermal and metallurgical coal to Korea, the thermal coal obviously came out of the PRB, the met coal came off the east-coast majority of it went through DTA and Curtis Bay.

[John Bridges](#) - JPMorgan

And the PRB is going out to the West Coast?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Yes sir.

[John Bridges](#) - JPMorgan

Okay and then just as a follow-up the two draglines that are ideal, this is a really sum how much production would that represent?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

You know John I guess I would rather not go there on specific numbers, you know I think you can just look at our overall guidance and look at our history as to what those volumes would amount to.

Operator

And our next question will come from Kuni Chen of CRT Capital Group.

[Kuni Chen](#) - CRT Capital Group

Hey, good morning folks.

[John Eaves](#) - President and Chief Executive Officer

Good morning.

[Kuni Chen](#) - CRT Capital Group

I guess just first question on the PRB, obviously in the fourth quarter you layered in some tons here to run at an efficient level for 2013, are you basically there already or do you have to layer in perhaps a few more tons in the first half to keep your cost structure within the range?

[John Eaves](#) - President and Chief Executive Officer

I guess without citing it specifically, we are sitting at about 90% committed, which is really one of the better positions we have been in a long time. And I think the market outlook and the volumes we have to sell are kind of baked in our guidance. So, I think we have taken it into account.

[Kuni Chen](#) - CRT Capital Group

Okay, fair enough. Then I guess just on the Central App, it looks like you committed some tons in the fourth quarter at sort of a high \$70 per ton type of range. Is that something with the mix there? Can you just give us some more color on that?

[John Eaves](#) - President and Chief Executive Officer

Yeah. I think there is a little bit of noise I think in those numbers, but what you are seeing is I think what you are seeing particularly in the east is kind of a bit of a combined impact of volume dropping off and gas pushing up the industrial accounts. And some of those customers going back to coal are obviously since we have some higher quality products we have been able to capitalize on this and pick up some of that market segment in otherwise what's been a pretty tepid thermal market. Bottom line is our marketing guys did a good job and these -- what you see is clearly a great effort, but I think the number is probably little high from what you are seeing in the market.

Operator

And our next question will come from David Gagliano with Barclays.

[David Gagliano](#) - Barclays

Great, thanks for taking my questions. My first question back on the PRB volumes overpriced in the fourth quarter, I just want to step back for a second even if we assume for example the sales based cost come down in etcetera, etcetera. It looks like it's still the best kind of a breakeven commitment on 16 million tons. So, my question is the obvious question obviously can you just walk us through the logic of why that's better than shutting it down leaving in the ground and then selling it at \$1 or \$2 per ton margin in 2014 for example?

[John Eaves](#) - President and Chief Executive Officer

Dave, this is John. A couple of things and Paul touched on I think the fact that we are able to turn that into additional business in '14 and '15 at very attractive prices, I mean, you've just seen '14 we are not showing you '15, but we really have turned it in multi-year business. I think the second piece is that we are trying not to be shortsighted as we look at strategically in terms of our global customer base. And we don't wanted to show up when things get good, we want to make sure that we have established long-term relationships with some of our international customers that we are ready when the market does turn. And we know it's going to turn, because when you look at the new coal, our generation being built around the world we are struggling on where all that supply is going to come from. So, Arch has been very proactive in developing that international customer base. We have been very proactive in going out and getting port capacity. We want to be part of that, because as we look to the U.S. over the next three to five years, I mean, let's face it, I mean demand is going to be pretty flat. And if we are going to grow we have to look at that market and we can't wait a year or two down the road for markets to improve to be part of it. So, I think the marketing guys have done a great job in developing relationships all over Asia, long-term relationships, port relationships that we think will serve us well. And I mean, if yeah, we don't like the prices either, but we do think strategically it's important to do that now versus late.

[David Gagliano](#) - Barclays

Okay, I have just a two-part follow-up question. First of all, the midpoint of your full year volume target, it implies another 14 million tons obviously to go, I am assuming that's all in the PRB. It's related to one of the questions earlier. My first part of my question is that how should we think about that? Is that, that's going to be sold at whatever the prices are or is there potential for that to be shut-in? That's my first question. And then my second question along the lines of your commentary, I am just curious over the last 14 years that covered the company like it has changed in terms of the view towards the PRB. This is the same company that for the first 12 years I looked at it 13 years or whatever would consistently say we are not going to sell the coal if it's not at the right price and we will leave it in the ground, what's changed in the last year such that now it's more about maintaining long term relationships et cetera.

[John Eaves](#) - President and Chief Executive Officer

Well I think it's both, I mean we always evaluate every transaction and make a decision accordingly and we'll continue to do that. As Paul mentioned we got a lot ideal equipment in the PRB right now that we don't plan on bringing back on until we see sustained demand. But I think what has changed is the marketplace and the marketplace has changed to gear us more to the international market and to establish that market, we got to go out and develop relationships and sell coal and that has you know put us in a position where we have done some of that that we think will serve us well when the market turns. Is it a given that all the uncommitted coal at our met points is going to be sold, no, it's not, I mean we're going to evaluate the market and we will make a decision at the time whether we sell it or we leave that production in ground.

Operator

And our next question will come from David Martin of Deutsche Bank.

[David Martin](#) - Deutsche Bank

Was hoping you can give us a little color on the moving parts related to your app cost guidance for 13, is it essentially that had a change in mix you know offsets the benefit of high cost mine curtailments and then I was going to ask about Leer startup cost impacts but I think John you said earlier those don't get reflected in average cost.

[John Eaves](#) - President and Chief Executive Officer

Yes from the startup cost impact David you're correct under the accounting those essentially get capitalized into the development of the operation.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

I think just to add a little color, if you look at our cost you know they went up about \$6 compared to 2011 and a lot of that in 2012 will be in 2013 as the shift a higher percentage of metallurgical production. You can garner from the numbers will be about evenly split in 2013 between met and thermal in the east and that's got an obvious cost impact.

[David Martin](#) - Deutsche Bank

Okay and then secondly I just wanted to come back to the earlier comments on sales related cost and don't take my question the wrong way. I know I guess what I'm trying to understand is where are those sales related costs are embedded 'cause I look at your for example your SG&A cost guidance and there is really no difference year-over-year.

[John Drexler](#) - Senior Vice President and Chief Financial Officer

Yeah David from sales related cost the royalties and taxes that are paid on the sale of coal in any of our regions and any of our operations off loads through the cost of sales line and is considered a cash cost. So as you look at as an example our regional per ton analysis, the sales sensitive costs are part of that cash cost per ton. SG&A is really all corporate overhead related items, anything associated with the sale of that cost is flowing through our income statement on cost of sales and it's reflected in our detail analysis, regional cost analysis and the cash cost per ton.

Operator

And our next question will come from Andre Benjamin of Goldman Sachs.

[Andre Benjamin](#) - Goldman Sachs

I was first hoping that maybe clarify how you're thinking about the balance sheet and the use of cash that you built up. I know you have indicated that you like to be capitalized to handle a potentially extended downturn. So should we continue to expect that you'll just hold that cash until the market is stabilizes and then prepay the callable debt or when things stabilize, can we see you turn around and use some of that cash on some of the growth opportunities you have highlighted that target value reserves on the (inaudible) basin.

[John Drexler](#) - Senior Vice President and Chief Financial Officer

Clearly as we indicated, we felt it was prudent in the fourth quarter to go and bolster liquidity on the balance sheet for the market downturn and for whatever the extension on that downturn is even if we don't expect it to be prolonged. So right now we're in a position where we're going to be managing to that liquidity closely as indicated in my prepared remarks you know we expect operating cash flows to potentially be below where they were last year so we will watch this closely but as we have indicated over the course of the call we're beginning to see signs of improvement and given the positioning of Arch as things do improve as markets do turn we think the earnings potential cash flow potential is significant, a very primary focus for us once we begin to see that turn we begin to get confidence in those markets moving forward in a very positive way for an extended period of time. We will have the ability then to go and address what we believe is higher leverage than what we would like to have. So, that will be a primary focus for us. However, clearly, wherever the markets are going, we will way the opportunities we have with organic growth projects etcetera, but as we have indicated numerous times, our primary focus will be de-levering as we move forward as the markets do turn.

Operator

(Operator Instructions) Our next question comes from Chris Haberlin of Davenport & Company.

[Chris Haberlin](#) - Davenport & Company

Hi, thanks for taking my call.

[John Eaves](#) - President and Chief Executive Officer

Hi Chris.

[Chris Haberlin](#) - Davenport & Company

You in your release, you talked about consumption, coal consumption increasing this year by approximately 50 million tons and it sounds like you are looking for an inventory drop through the year of 25 million to 30 million tons. So, that kind of leaves sales at 20 million or 25 million tons and how do you – I guess, how do you think that incremental sales volume should be distributed across the major thermal basins in the U.S.?

[John Eaves](#) - President and Chief Executive Officer

Well, I think it depends on where gas prices are. I would tell you that with that kind of inventory draw of natural gas prices in the \$3.40, \$3.50 range where we have been seeing we think that the PRB and probably the Western Bit coals will do pretty well. And we are actually seeing that today. If you look at the marketplace both of those coals are dispatching on the curve. And as that inventory comes down, I think the buying activity will only improve and you should see improvements in both the PRB and the Western Bituminous for Arch.

Operator

And our next question will come from Meredith Bandy of BMO Capital Markets.

[Meredith Bandy](#) - BMO Capital Markets

Hi guys. So, most of my questions have obviously been asked and answered, but one question I had was in Appalachia in 2014, you gave us new sales guidance there of 1.7 million tons sold at \$53.98. I was just surprised that, that number fell so drastically. When was that sold? Would you see the current market as being – is that indicative of the current market, is the current market better or worse than that?

[John Eaves](#) - President and Chief Executive Officer

I believe that, that's some carryover volume that we got through the ICG transaction and that we see the markets better than that in 2014, but that is for the most part carryover from ICG.

Operator

And our next question will come from Justine Fisher of Goldman Sachs.

Justine Fisher - Goldman Sachs

Good morning.

[John Eaves](#) - President and Chief Executive Officer

Good morning.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Good morning Justine.

Justine Fisher - Goldman Sachs

So, my question is on the kind of the production plan given potential outcomes in 2013 and it seems that most of the coal companies are not planning to increase production this year even though we hear a lot of talking about how the second half could be stronger, especially with natural gas. And so I know why you are not, because you have answered to other questions that you don't want to do it until you see a meaningful increase in demand, but the question is how quickly could you bring that tonnage back if you did see meaningful demand? And then also would you or would you just say no, I am sorry we are not going to produce that much and let prices get really higher, do you think that you guys would produce into that higher price environment?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Well, I think the answer how fast that production could come back depends on the base. In the PRB obviously I think we are poised very well to respond to whatever the market brings. And obviously we will be very careful. Same in Western Bit, we have the longwall that's idle at Dugout Canyon, and you saw how effective it was in Q4 of 2012. The east, I think is a tougher issue. I think a lot of the production I know the stuff that we shutdown, some of that's not coming back very easily and I think it take a significant market shift for us to even think about the Eastern operations bring back thermal coal.

[John Eaves](#) - President and Chief Executive Officer

Yeah, I think you have seen some structural changes in the east. And as to Paul's point, I mean you are going to see a lot of those tons that will not come back and that's why we are optimistic about what's going to happen in the PRB and to a lesser extent maybe Western Bit, and we think as that demand starts to reassert itself, we think that PRB comes into play pretty quickly.

Operator

And we will now move on to Evan Kurtz of Morgan Stanley.

[Evan Kurtz](#) - Morgan Stanley

Hi, good morning everyone.

[John Eaves](#) - President and Chief Executive Officer

Good morning.

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Good morning.

[Evan Kurtz](#) - Morgan Stanley

Just a quick question on met coal, in 2012 what was your split between export tons versus sales of domestic steel mills and how do you see that changing in 2013?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

I think our export in 2012 was 65% thermal and 35% met. My guess is excuse me 2012 – 2013 my guess is the metallurgical volumes will tick up a little bit as compared to the thermal volumes on the export side.

[Evan Kurtz](#) - Morgan Stanley

Okay got you and then could you provide me a color perhaps on how domestic met coal contracts ship out this year maybe on a differential from a light quality basis.

[John Eaves](#) - President and Chief Executive Officer

I will just say in terms of volume we did a very good job of maintaining our market share and I'm very pleased with where the guy shook out and you know if you look at it, what we did was we took off the table in the domestic market, most of our PCI and lower quality high (inaudible), and obviously that's with the anticipation that the higher quality coals will travel overseas better and garner better prices.

Operator

And we'll take our next question from Lance Ettus of Tuohy Brothers.

[Lance Ettus](#) - Tuohy Brothers

Just wanting to know you know on just on the asset sale side, I mean have a lot of I think excess reserves in PRB and also (inaudible) basin, those bases are still viable and you know the only base reserves obviously to wrap your fiber volume properties and maybe that area maybe is considered not core. I guess kind of elaborate more in the potential for selling these assets and you know I guess the interest we're seeing out there maybe we're approaching those assets.

[John Eaves](#) - President and Chief Executive Officer

Well I mean we're talking to a number of people as we have and we will continue, I wouldn't I mean in this environment, I think it's pretty challenging to try to monetize assets and again I don't want to talk about any particular region, I do think the Illinois overtime could very well become a core operating region for Arch Coal depending on how we see the market evolve. I mean obviously, we're very bullish on the PRB, you know another area that might be somewhat challenged based on our comments is kind of the east and the way we see the thermal market potentially but you know we will have to evaluate the opportunities we have to monetize assets and see if they meet our needs, if not as I indicated earlier we're not in a situation where we have to buy or sell assets. So somebody is going to have to provide more value than we can provide in order for us to do a transaction.

Operator

And we will take our final question from Dave Katz of JPMorgan.

[Dave Katz](#) - JPMorgan

I was just wanting to confirm you guys are still I guess with the amendment that was put through on the credit facility. In November you have the maximum senior secured leverage ratio in 2013 of 3.5 right?

[Paul Lang](#) - Executive Vice President and Chief Operating Officer

Correct.

[Dave Katz](#) - JPMorgan

And do you anticipate being able to comply with that throughout the year?

[John Eaves](#) - President and Chief Executive Officer

We don't anticipate having any concerns with that the other major item there is the minimum liquidity measurement of \$450 million and we feel comfortable with the structure that we have in place.

Operator

And at this time I'll turn the conference back over to John Eaves for any additional or closing remarks.

[John Eaves](#) - President and Chief Executive Officer

Thank you. We certainly appreciate you join us today. We feel good about the way we position the company, first of all our safety and environmental performance for 2012 again showed our leadership in that area. Our ability to maintain cost and capital in a low volume environment, our ability to go out and put additional cash on our balance sheet. We think all these things has positioned us very well that continue to weather this storm and be positioned when market does turn and it will turn. So we look forward to updating you in April on our first quarter results. Thank you.

Operator

And that does conclude our teleconference. Thank you all for your participation.

Copyright policy: All transcripts on this site are the copyright of Seeking Alpha. However, we view them as an important resource for bloggers and journalists, and are excited to contribute to the democratization of financial

information on the Internet. (Until now investors have had to pay thousands of dollars in subscription fees for transcripts.) So our reproduction policy is as follows: **You may quote up to 400 words of any transcript on the condition that you attribute the transcript to Seeking Alpha and either link to the original transcript or to www.SeekingAlpha.com. All other use is prohibited.**

THE INFORMATION CONTAINED HERE IS A TEXTUAL REPRESENTATION OF THE APPLICABLE COMPANY'S CONFERENCE CALL, CONFERENCE PRESENTATION OR OTHER AUDIO PRESENTATION, AND WHILE EFFORTS ARE MADE TO PROVIDE AN ACCURATE TRANSCRIPTION, THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORTING OF THE SUBSTANCE OF THE AUDIO PRESENTATIONS. IN NO WAY DOES SEEKING ALPHA ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED ON THIS WEB SITE OR IN ANY TRANSCRIPT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S AUDIO PRESENTATION ITSELF AND THE APPLICABLE COMPANY'S SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

If you have any additional questions about our online transcripts, please contact us at: transcripts@seekingalpha.com. Thank you!

APPENDIX 40

Seeking Alpha α

The War On Coal: Sell Arch Coal

November 20, 2012

by: Kofi Bofah

| about: [ACI](#)

Disclosure: I have no positions in any stocks mentioned, and no plans to initiate any positions within the next 72 hours. **(More...)**

Coal industry fundamentals remain notable for extreme volatility. Earlier this summer, Patriot Coal went bust as the effective canary in the coalmine. The coal industry now battles against the politicized "War on Coal" that is now a catch phrase encompassing declining coal prices, booming natural gas production, and alternative energy solutions. Amidst this ongoing malaise, energy analysts take care to break down specific coal portfolios in terms of geography and chemical composition. In this environment, the search for the alpha, or "best of breed" coal stock will likely prove futile. This strong sell call on **Arch Coal (ACI)** serves as an indictment against an industry that remains at risk of becoming outdated amid global recession.

The Coal Market

The United States and China are the two major bookends of the world's coal market. In terms of reserves and production, the U.S. and China headline a top-ten list that includes Russia, Australia, India, South Africa, and Indonesia. On the consumption side of the ledger, coal is obviously an important energy resource for China and the United States, the world's two largest economies. According to the [Energy Information Administration](#), roughly 90% of U.S. coal production remains state side for power generation. Rapidly industrializing China, of course, is a primary destination for coal exports.

Lignite and sub-bituminous are low-grade classifications of coal primarily used as fuel for electric power generation. Bituminous coal is a mid-grade resource utilized for both electric power generation and coke, which is the primary fuel driving blast furnace steel production. As a premium fuel, anthracite coal is best reserved for domestic heating, due to its relatively high carbon content for clean burning and costly expense. In this political environment, access to bituminous and anthracite coal reserves alongside heavily trafficked trade routes to China are critical to the success of any mining operation.

Within the United States, coal mother lodes stretch through Appalachia and the Interior Rocky Mountain region. Wyoming, as the nation's leading coal producer, is home to the bituminous coal rich reserves within the Powder River Basin. Across the Mississippi, anthracite coal is a leading resource of Central Pennsylvania. Despite this abundance, U.S. Energy policy remains unfavorable to the maximum cultivation of domestic coal resources. Wyoming coal is effectively shut in and away from the international marketplace due to the lack of political willpower to build export terminals on the West Coast. Alternatively, Eastern Seaboard and Gulf Coast businesses often find it cheaper to import overseas coal, rather than transport this fossil fuel via rail.

Coal, of course, is always a convenient scapegoat for environmentalist groups. Coal emissions include sulfur dioxide, nitrogen oxide, mercury, and carbon dioxide. Until fairly recently, natural gas served as the more energy efficient, but expensive alternative to coal. Improved hydraulic fracturing, or fracking, technology to develop the Marcellus and Barnett Shale formations may effectively contribute to persistent natural gas gluts within the United States.

Over the past year, coal and natural gas spot prices have converged near \$2.50 MMBtu. At this price point, utilities will convert to natural gas, at the expense of coal usage. As an energy resource, coal now accounts for a dwindling 40% share of U.S. power generation. Coal is losing the war.

Arch Coal Portfolio

[Arch Coal classifies domestic mining operations](#) according to geography, pricing, and energy quality. Arch mines are concentrated within Appalachia, Illinois, and the Interior Rocky Mountain region. Arch Coal management promotes a resource portfolio both rich in access to Appalachian metallurgical, or coking, coal for steelmaking, alongside the low-sulfur content coal of Wyoming's Powder River Basin for cleaner power generation. Going forward, access to Wyoming's Powder River Basin coal will prove critical to meet the inevitably tougher environmental standards proposed by Federal lawmakers.

Arch Coal's Appalachian region straddles the West Virginia, Kentucky, Maryland, Pennsylvania, and Virginia borders. Appalachian coal is notable for both its relatively high-energy output and sulfur content. For its 2011 fiscal year, Arch itemizes more than 500 million tons of recoverable coal reserves located within Central and Northern Appalachia. On average, Appalachian coal generates 12,778 Btus of energy per pound, while emitting between 1.2 and 2.5 pounds of sulfur content per one million Btus. For the sake of comparison, Powder River Coal generates 8,837 Btus per pound, and maintains sulfur content of less than 1.2 pounds per million Btus energy generated. Arch operates with roughly 1.5 billion tons of recoverable reserves within the state of Wyoming. Weak coal prices alongside tighter E.P.A. regulations will force the shutdown of underperforming mines throughout Appalachia.

The Bottom Line

Boom and bust scenarios are typical for all commodity plays. The coal industry is now deleveraging rapidly alongside both the aforementioned natural gas glut and lackluster economic forecasts throughout the Western industrialized world. Arch Coal profits are especially at risk, as this company ships the majority of its coal between the American and European continents. For Arch, the spectacular buildup of the Chinese marketplace is largely irrelevant. Indonesian and Australian mining operatives, such as BHP Billiton ([BHP](#)) can easily undercut Arch on transportation costs to China. For 2011, Arch reports a mere \$61 million in Asian revenue out of \$4.3 billion in total sales.

During fiscal year 2012, Arch Coal's profitability has declined sharply. Although sales remain flat, \$523 million in mine closing costs have contributed to \$390 million in losses over the past nine months. Efficient cost cutting measures, rather than increasing coal production, pricing, and demand are largely responsible for the \$46 million in [Arch Coal Q3 2012 profits](#). Arch Coal stock was to decline from \$8.48 to \$6.50 for a sharp 25% loss over the three weeks following the release of this latest report. The steady deterioration in shareholder value will continue, as coal effectively goes the way of wood.

Conservative investors should sell Arch Coal stock.