



MEMORANDUM

TO: Marina Lou, Legal Advisor (Financial Markets Regulation), Greenpeace International
FROM: Tom Sanzillo, Director of Finance, Institute for Energy Economics and Financial Analysis
SUBJECT: CONSOL proposal to create CNX Coal Resources LP
DATE: June 3, 2015

Background

CONSOL Energy, Inc. is proposing to form a new company known as CNX Coal Resources, LP. This master limited partnership (MLP), according to its filing with the SEC on April 1, 2015, will “manage and further develop all of CONSOL’s thermal coal operations in Pennsylvania.”¹ CNX, LP will have a 20% undivided interest in and operational control over CONSOL Energy’s Pennsylvania mining complex, which includes the Bailey, Enlow Fork, and Harvey mines.

The mining complex has a capacity of 28.5 million tons per year (actual 26.1 million tons produced in 2014). The coal is Pittsburgh No. 8 Coal Seam with average gas and heat content of approximately 13000 Btu. CONSOL states that the new subsidiary and the mines have several market strengths: 1) significant transport cost advantages compared to coal coming from the Powder River Basin (PRB) and Illinois Basin (ILB); 2) favorable operating environment compared to Central Appalachian coal (CAPP); 3) higher Btus, lower sulfur and chlorine than competitors, 4) good logistics, and 5) low cost mines.

Coal companies are creating master limited partnerships as a strategic response to the severe financial impacts of the industry’s permanent, structural decline in the United States. In this case, CONSOL Energy, Inc. is seeking to protect its natural gas operations from any potential risks involved with a troubled coal market. The company is also attempting to segment for value considerations its currently productive mines.²

¹ <http://www.sec.gov/Archives/edgar/data/1637558/000119312515115045/d896459ds1.htm>, p.1.

² Taylor Kuykendall, *MLP structure may position CONSOL operations for growth in poor coal markets*, SNL, May 28, 2015.

CONSOL overestimates the potential success of the new venture

As demonstrated by the company's overall stock performance during the last five years, the company has experienced a 23.5% decline in its price. This is at the same time that the broader market has risen by 76%. The deterioration in CONSOL's stock price, while significant, is actually less pronounced than the industry as a whole. According to the SNL Coal stock index, coal stocks have deteriorated by 66.5% during the last five years.



CONSOL's relatively advantageous position has more to do with its expansion into natural gas drilling than its coal business. The new investment mechanism outlined in the S1 Form segments CONSOL's coal business and allows the company to concentrate on the natural gas investments. While CONSOL is optimistic about the future growth prospects of segmenting its mining operations, there is nothing presented in the S1 that fundamentally alters the conditions driving the downward trend of CONSOL's coal operations and the industry's problems in general.

The problem for CONSOL's mining operation is the price of coal, domestically and internationally. As outlined below in detail it is unlikely that the pricing environment will improve. CONSOL's efforts will have no impact on market fundamentals: natural gas prices will remain low, wind, solar and energy efficiency will remain strong competition, public concerns as expressed in regulatory proceedings and ongoing demands for climate agreements will persist and demand for coal imports from India and China is unlikely to rise long term. Since April, when the S1 preliminary document was released, the company has cut back hours for its employees citing the weak price environment.³

Substantive considerations

The CNX Coal Resources, LP Form S-1, filed with the Securities and Exchange Commission on April 1, 2015 provides several types and levels of data and analysis to support claims that the U.S. and export coal markets will sustain the company's effort to improve its investment outlook. Many of these statements, if left uncorrected, will result in a final S-1 submission that is misleading to investors.

³ Taylor Kuyendall, *CONSOL Energy trims production schedule due to weak coal price environment*, SNL, May 18, 2015.

First, the filing uses select data from the United States Energy Information Administration Annual Energy Outlook (EIA/AEO) and analysis by Wood Mackenzie (WM), a coal consultant, to paint a picture of a stable and relatively prosperous Northern Appalachian coal region

However, a closer look at the complete body of information produced by these two sources, all of which was available to CNX, shows that the actual picture is quite different. And the economic evidence and actual experience in the Northern Appalachian coal region clearly contradicts this claim.

For example, for the past five years, the EIA has actually been showing declining market interest in the region and WM's "stable" long term picture only shows stability at extraordinarily low levels of production.

Second, several WM references, particularly those related to the global markets, are outdated. The company is changing its position, and over the past several months has offered a series of materially relevant updates to some of the data and assumptions cited in CNX's market outlook in the S-1. These updates, which were available to CONSOL, reflect a far more cautious outlook for the global thermal coal market.

Third, the company claims to have a "blue chip" portfolio of coal plants. CNX says these plants are likely to continue to purchase coal at substantial levels because they are not at risk of closure or retirement. However, most of the coal plants in the CNX portfolio are merchant plants, which are the most vulnerable to financial stress and are among the least favored option of utilities in this market.⁴

The Northern Appalachian Market is not stable. Production is weak and prices are declining.

CNX's filing does not mention the long term price decline in the Northern Appalachia region.

CNX's S-1 Form contains the following characterizations of the U.S. and Northern Appalachian coal region.

Favorable long-term outlook for U.S. coal market. According to the EIA's Annual Energy Outlook 2014, domestic thermal coal consumption is expected to increase to approximately 970 million tons by 2025 and coal's share of domestic power generation is projected to average 38% throughout the forecast period.

Stable demand for coal produced in the Northern Appalachian Basin. According to Wood Mackenzie, thermal coal production in the Northern Appalachian Basin is expected to stay relatively constant, with 116 million tons per year expected to be produced by 2035. Wood Mackenzie believes, in the near-term, this stable production forecast will be driven by a combination of the continued decline in coal production in the Central Appalachian Basin, the proximity to demand centers and high-Btu content of coal reserves. Also, coal produced in the Northern Appalachian Basin is a cost competitive fuel resource on a delivered cost,

⁴ <http://www.powermag.com/aep-looks-to-sell-merchant-coal-fleet/>

heat content and sulfur content adjusted basis to a large percentage of baseload coal fired power plants in the eastern United States. Long-term, Wood Mackenzie anticipates that an increasingly greater amount of Northern Appalachian thermal coal will be demanded by the international markets as a low-cost high-Btu source of coal supply.⁵

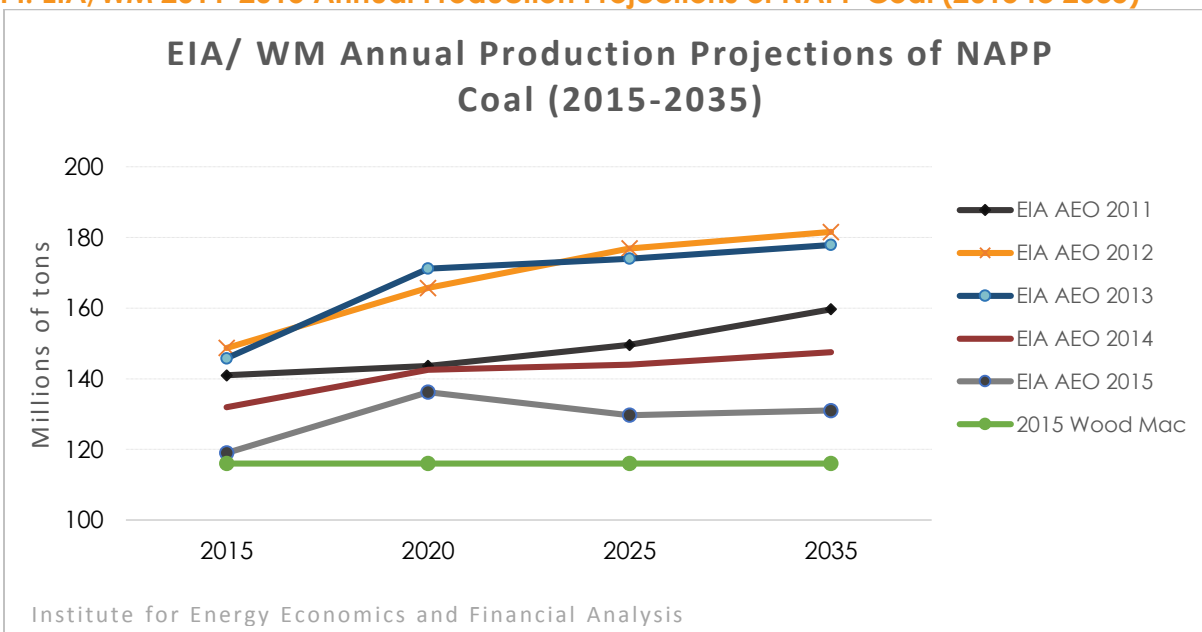
There are several flaws in these statements.

First, the near term outlook is weak and the long term outlook is at best modest. The EIA 2014 Annual Energy Outlook (AEO) projects an increase in coal consumption for electricity of 26 million through 2025 (to a national total of 919 million tons per year by 2025). Of this 26 million, 22 million occurs in the latter part of the decade, from 2021-2025. In the near term, this would mean an increase of 4 million tons of coal consumption through 2020, less than one million tons per year. AEO's overall national predictions would mean a 0.3% increase each year in coal consumption for the next decade. This is not a favorable outlook. By contrast, for example, during the from 1995-2005 annual U.S. coal consumption grew by 1.8% per year.

For investors, the long-term outlook for the U.S. coal industry is weak and the near term is perilous. The EIA data does not support CNX LP's predictions for a favorable long term outlook.

Second, even the modest increases in coal production predicted by EIA for the national level do not extend to the Northern Appalachian coal region. The EIA's long term forecast for the NAPP region has deteriorated over the last five years, as shown in Chart I below. EIA's 2012 and 2013 AEOs estimated that NAPP coal production would reach approximately 180 million tons per year by 2035 (and started from a base 2015 estimate in excess of 140 mtpa). However, the 2015 AEO estimates NAPP production levels by 2035 at around 130 mtpa. This is a downgrade of 50 mtpa, or 28%, from the 2012 and 2013 estimates.

Chart I: EIA/WM 2011-2015 Annual Production Projections of NAPP Coal (2015 to 2035)



⁵ <http://www.sec.gov/Archives/edgar/data/1637558/000119312515115045/d896459ds1.htm>, p. 112

As is also clear from the above chart, WM's production estimate of 116 mtpa going forward (which is referenced by CNX), is actually even lower than the EIA forecasts. Taken together, the EIA AEO and WM scenarios present a consensus of a stable, *but weak*, forecast.

SNL Energy, an independent news and data resource for the energy industry, also projects a deteriorating outlook for the NAPP region. SNL projects production levels declining from 132 mtpa in 2015 to 113 mtpa in 2025.⁶

In addition, a review of EIA's spot price reports shows that Northern Appalachian coal prices have dropped from a recent high of \$78.00 in June 2011 to \$60.92 in April 2015.⁷ For the next several years there is no indication that U.S. coal prices or global coal prices will be rising at a level to sustain ample distributions to investors.

These weak production and price trends are likely to impact distributions to CNX investors. Most observers of the coal industry, like WM, have concluded that further cost cuts in the industry are unlikely to produce better financial results.⁸ As long as the current set of economic conditions persist (weak coal demand, oversupplied markets, low natural gas prices) cost cutting measures will reach limits and even the relatively healthy margins represented in CNX LP's S-1 Form can dissipate.

Thus, we conclude that the S-1 presentation mischaracterizes the weakening market in the region and offers a rather upbeat margin analysis. Substantially more caution is warranted.

Table I: Data for Chart I: EIA/WM Annual Production Projections of NAPP Coal (2015-2035)

EIA AEO 2011	EIA AEO 2012	EIA AEO 2013	EIA AEO 2014	EIA AEO 2015	2015 Wood Mac
140.98	148.74	145.77	131.9	119.00	116.00
143.63	165.72	171.21	142.57	136.20	116.00
149.59	176.92	174	144	129.70	116.00
159.69	181.55	177.9	147.5	131.00	116.00

The Global Markets are not an option for CONSOL

The source material citing Wood Mackenzie's forecast of a relatively robust international and domestic market does not reflect their current opinion.

The S-1's statement cites Wood Mackenzie's projections for a rather robust market for sales of Northern Appalachian coal to both domestic and international markets as support for its contention that CNX LP will be able to sell coal for export. For example, here is one citation:

Growth in seaborne thermal coal demand. Wood Mackenzie projects consumption of seaborne thermal coal to increase from 936 million metric tons in 2014 to approximately 1.9 billion metric tons by 2035, a compounded annual growth rate of 3.3%. Growth in international coal import demand has resulted primarily from increased demand for thermal coal for electricity generation by emerging global economies, particularly by countries in the Pacific market where coal is the primary fuel source for new power

⁶ SNL Energy, SNL Coal Forecast/Supply Forecast, March 2015.

⁷ http://www.eia.gov/coal/news_markets/archive/

⁸ <http://www.mining.com/web/wood-mackenzie-nearly-17-us-coal-production-uneconomic-current-market-pricing/>

generation. According to Wood Mackenzie, seaborne imports to China are expected to grow from 198 million metric tons in 2014 to 592 million metric tons in 2035, a compounded annual growth rate of 5.4%. In 2014, China's imports accounted for 21% of total seaborne demand. Between 2014 and 2035, India's seaborne thermal coal imports are estimated to rise from 142 million metric tons in 2014 to 462 million metric tons in 2035, a compounded annual growth rate of 5.8%. India's share of the seaborne thermal coal market is estimated to increase from 15% in 2014 to 25% in 2035.

Demand in China and India are of special importance because they drive the world thermal markets. CONSOL may be able to sell to Asia, but as important robust demand from Asia opens up market potential in Europe, also a key market for CONSOL. In the last several months Wood Mackenzie has been adjusting its outlook on coal in several respects. First, it has noted a significant number of U.S. and global thermal coal mines are no longer profitable given recent downward price pressures.⁹ Second, WM sees a continuing low price environment and lower mine valuations currently and in the near term.¹⁰ Third, the company has altered its view on Chinese coal markets. The company now sees greater internal economies and policies resulting in a decreased reliance on coal imports.¹¹ Fourth, it says U.S. coal producers are most vulnerable to the declining global thermal coal trade.¹²

Wood Mackenzie's adjustments to its outlook actually lag a broad consensus held by most analysts that the condition of the coal industry in the United States and around the globe is poor and likely to get worse. This consensus is outlined in more detail below.

CONSOL faces limited export options; the markets are shrinking

CONSOL's expansive statements about the growth of the international seaborne trade are contradicted by the facts, as explained below.

The total seaborne global coal trade (including all types of coal) in 2013 amounted to 1.3 billion tons. The global seaborne *thermal* coal trade in the same year, a subset of the total market, was approximately 1.0 billion tons per year, according to the EIA.¹³

Several important dynamics are now causing shifts in the global seaborne coal markets. Many of these factors would decrease CONSOL's likelihood of being able to export NAPP Coal to China and the Pacific markets. These include:

Chinese coal imports dropped to 282 million tons per year¹⁴ in 2014, from a level of 327 million tons in 2013. (Prior to 2008 China rarely imported more than 50 million tons of coal). Chinese coal imports remain challenged amid slower demand and efforts to support the domestic coal industry, including quality restrictions, tariffs and lower domestic taxes that have temporarily

⁹ <http://www.mining.com/web/wood-mackenzie-nearly-17-us-coal-production-uneconomic-current-market-pricing/>

¹⁰ <http://www.woodmac.com/public/views/global-coal-future>

¹¹ http://www.rigzone.com/news/oil_gas/a/136981/Wood_Mackenzie_Chinas_Energy_Demand_Needs_Review_Amid_Economic_Changes

¹² <http://www.woodmac.com/public/media-centre/12526159> and <http://www.bellinghamherald.com/2015/02/11/4128145/once-bullish-on-coals-prospects.html>

¹³ <http://www.eia.gov/oiaf/aeo/tablebrowser/>

¹⁴ <http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/req/REQ-March15.pdf>

prevailed over delivered import economics. In the first two months of 2015, Chinese, thermal coal imports declined 51%, while metallurgical coal imports fell 14%, indicating relatively stronger underlying Chinese seaborne metallurgical coal demand.

Although much of the coal industry now sees India as the main bright spot for future coal demand,¹⁵ the Indian policy message on imported coal is mixed.¹⁶ India is likely to continue importing coal for the next three to five years. Steam coal imports in 2013 were 142 million tons and could rise to 200 million tons in 2015.¹⁷ On the other hand, the Indian government was placed at a serious disadvantage in the years when coal and oil prices rose, contributing heavily to the country's deficit and weakening rupee.¹⁸ The country has considerable domestic coal reserves that have not been handled efficiently.¹⁹ Even with global prices at their current lows, the cost of imported coal far exceeds that of coal that is mined and sold by the country's state owned enterprise Coal India.²⁰ The government has announced its intention to drive down the level of imports.

It is likely that European demand for thermal coal will remain largely flat with Germany and England remaining relatively sizable importers by European standards, but remaining as minor drivers of supply and demand.

Japan, Taiwan and Korea -- the principal sources of import demand of thermal coal in Asia outside of China and India -- import approximately 300 million tons today. They, plus Vietnam (not listed above) would have to increase coal use by 200 million tons in five years just to keep markets at current production and shipping levels. As it stands, today's production levels and the organization of the industry globally is unsustainable.

Table II: Leading World Exporters of Coal (2013) in million tons

Country	Total	Steam	Coking
Indonesia	426	423	154
Australia	336	182	22
Russia	141	118	60
USA	107	47	1
Columbia	74	73	0
South America	72	72	33
Canada	37	4	33

Source: <http://www.worldcoal.org/resources/coal-statistics/>

Table III: Leading World Importers of Coal (2013) in million tons

Country	Total	Steam	Coking
China	327	250	77
Japan	196	142	84
India	180	142	38
South Korea	126	95	31
Taiwan	68	61	7
Germany	51	43	8
U.K.	50	44	6

Source: <http://www.worldcoal.org/resources/coal-statistics/>

¹⁵ Rohan Somwanshi, Global seaborne coal exports to decline in 2015, but not enough to rebalance markets, SNL Energy, March 27, 2015

¹⁶ <http://in.reuters.com/article/2014/11/12/india-coal-imports-idINCKN0IW0FJ20141112>

¹⁷ <http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/req/REQ-March15.pdf>

¹⁸ http://www.ieefa.org/wp-content/uploads/2014/05/IEEFA-Briefing-Note_IndianElectricityCoalPricing_4-May-2014.pdf

¹⁹ <http://www.dnaindia.com/india/report-importing-coal-unjustified-as-country-has-huge-reserves-piyush-goyal-2071168>

²⁰ <https://www.pwc.in/assets/pdfs/industries/power-mining/icc-coal-report.pdf>, p.14

Overall, if both China and India were to achieve substantial reductions of 50%, 200 million less tons of thermal coal would be needed for the seaborne trade.

U.S. companies seeking to export coal to Asia are in competition with existing providers from other nations, including Indonesia, Russia, South Africa, Australia and Colombia.²¹ Combined, these countries exported 860 mtpa of steam coal in 2013.

These provider nations are not without problems,²² but they do have structural advantages that make them better positioned than new entrants to manage import demand in Asia: 1) they have more than one type of coal; 2) shipping is over shorter distances and they have more flexibility on pricing,²³ and 3) they have substantial reserves, which are likely to have extended lives as China and India cut back.

Global coal prices have collapsed and the market is oversupplied

Many U.S. mainland coal producers are looking to export coal to Asia. In 2011 and 2012, rising global demand and prices on the thermal market gave this scenario plausibility. However, the global thermal coal market is now oversupplied. In the current market, and for the foreseeable future, U.S. coal producers (including Northern Appalachian producers) face diminished export opportunities. To the degree there are current international thermal market sales from the United States they are probably based on pre-existing contracts and are not profitable.²⁴

International thermal coal prices have collapsed (see Figure II) and are likely to stay low for the foreseeable future. The price of Newcastle Coal, an Australian coal product used as a global benchmark for thermal coal, fell dramatically from 2011 to the present. At its peak in January 2011, the price was \$141.94 per ton. On March 19, 2015 the Newcastle price was \$59.50 per ton.²⁵ Looking forward, one Newcastle Coal Futures database identifies coal price contracts from 2016 to 2021 as trading in the \$55.00 to \$60.00 range.²⁶ (See Figure III) Persistent low prices are a sign that demand is falling. More to the point, the market gains that characterized the 2001 through 2011 period have faltered.

²¹ For a recent review of coal industry opinion on global markets and individual company outlooks see: Rohan Somwanshi, Global seaborne coal exports to decline in 2015, but not enough to rebalance markets, SNL Energy, March 27, 2015.

²² Arch has outlined the problems of each of its competitors. They continue to produce more than US in export markets despite these drawbacks. Russia, Colombia and Australia have ambitious expansion plans. . See: Arch Coal, Inc., *Investor Presentation*, May 2013, Slide 33.

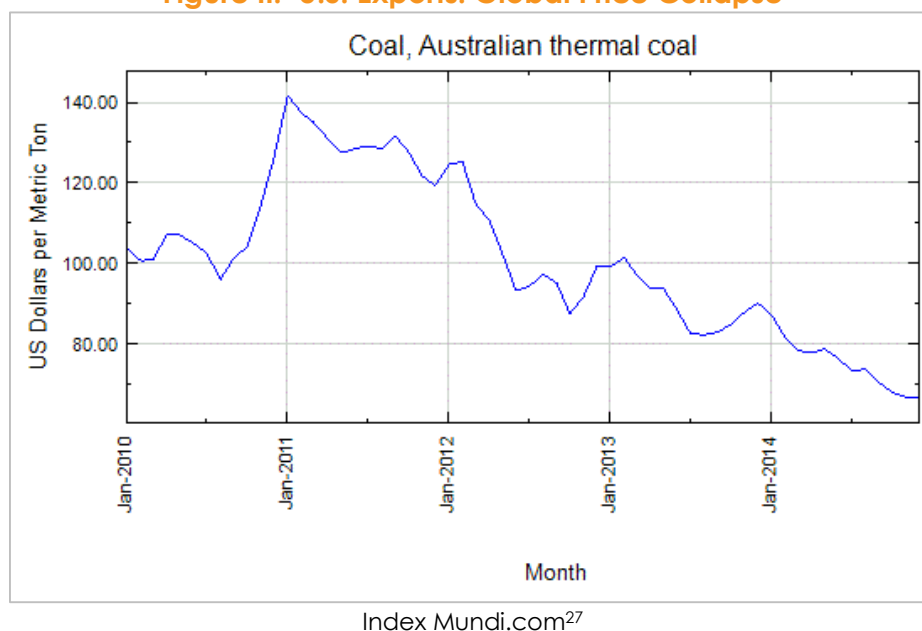
²³ As markets remain constrained Australasia based producers have greater incentives to undercut NA coal producers – and they have greater negotiating room as distances are shorter. All of the existing import and export relations are established and reflect broader trading and political relationships that are likely to continue.

²⁴ http://pg.rj.com.cn/acc/Res/CN_RES/INDUS/2014/6/29/37603388-1ecd-419e-8cbd-bd7d51fc5902.pdf

²⁵ For the current price of coal see: Platts Coal Trader International, *Platts Physical Thermal Coal Assets, Newcastle*, March 19, 2015. Some analysts see the price dropping below \$60.00 per ton through 2016. <http://www.worldcoal.com/coal/12032015/Coal-prices-to-drop-further-BofA-Merrill-Lynch-coal2059/>

²⁶ http://www.barchart.com/commodityfutures/ICE_NewCastle_Coal_Futures/LQ

Figure II: U.S. Exports: Global Price Collapse



Two of America's leading coal producers (Peabody Energy in late 2010²⁸ and Arch Energy in early 2011)²⁹ each provided an analysis of the Chinese coal markets using price points in the \$90 per ton range. Each company was predicting net back profits (the amount of profit received by the U.S. coal producer from the international market price of coal minus transport and logistics costs) in the \$20 per ton margins for this market. In 2012, China imported 327 million tons of coal (up from 200 million tons in 2011)³⁰ and coal producers worldwide were predicting longer term growth from this source.³¹ More recently, Cloud Peak Energy stated it would require a Newcastle price between \$80 and \$90 per ton before selling coal to China.³²

During 2014, the market for Chinese imported coal and the global coal market more generally cooled (see discussion below) and global prices have collapsed.³³ Most financial analyst projections have evolved to a clear consensus: as China reduces its import needs, sufficient capacity from the Pacific Rim producers (Australia, South Africa, Indonesia, Russia and perhaps China) exists to meet the needs of the remaining import countries, including India. U.S. and other North American coal producers will fill a niche market, but one not much larger than what exists today (see discussion below by Goldman Sachs, J.P. Morgan, Bernstein Research and Citigroup). This is also the conclusion of the extensively researched report released by Carbon Tracker Institute and the Institute for Energy Economics and Financial Analysis.³⁴

²⁷ <http://www.indexmundi.com/commodities/image.aspx?commodity=coal-australian&months=60>.

²⁸ Peter Gartrell and John Miller, Peabody projections show lucrative Chinese market for PRB coal. Platts Coal Trader December 6, 2010

²⁹ Peter Gartrell, Arch CEO sees \$20 range for PRB coal to Asia, Platts Coal Trader 1/31/11

³⁰ <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=1&pid=1&aid=3>

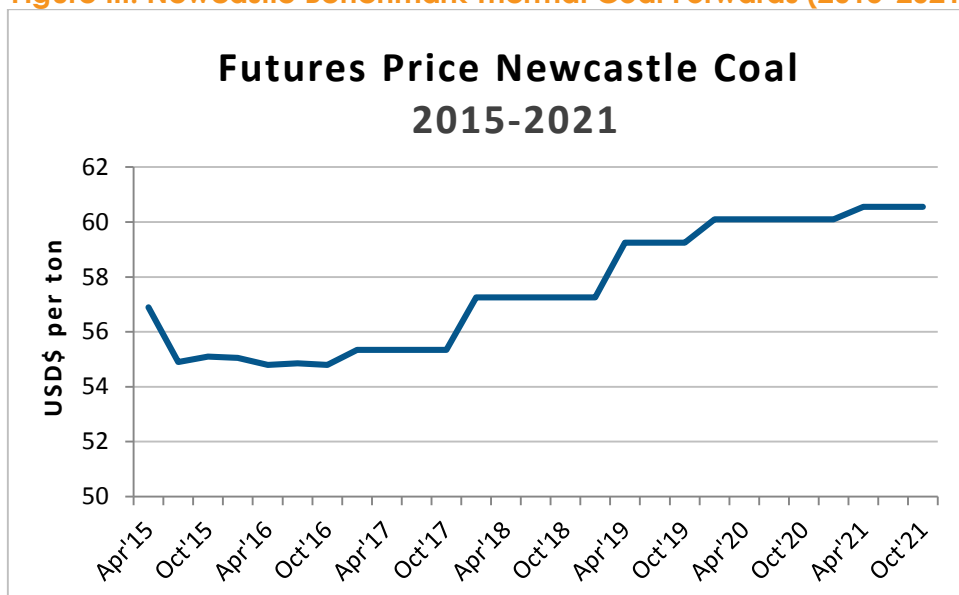
³¹ Dan Lowrey, Woodmac sees half of US coal production exported by 2030, SNL, March 7, 2012.

³² <http://seekingalpha.com/article/2175763-cloud-peak-energys-ceo-discusses-q1-2014-results-earnings-call-transcript?part=single>

³³ <http://www.theguardian.com/environment/2014/oct/22/chinas-coal-use-falls-for-first-time-this-century-analysis-suggests>

³⁴ <http://www.carbontracker.org/wp-content/uploads/2014/09/Coal-Demand-IEEFA-complete.pdf>

Figure III: Newcastle Benchmark Thermal Coal Forwards (2015-2021)



Source: <http://quotes.esignal.com/esignalprod/quote.action?symbol=NCFQ-ICE>

The API 2 benchmark, the leading indicator for European coal faces the same problematic outlook with recent future prices through 2021 in the high \$50 per ton range.³⁵

The optimistic statements about the global thermal coal market attributed to WM in the S-1 give investors the impression of a viable market outlet for CNX product.

The S-1 neglected to mention that Wood Mackenzie (WM), a prominent global coal consultant has recently altered its once-optimistic position with regard to the export potential of the Asian market for U.S. producers.

Wood Mackenzie's positions have gone through the following evolution:

WM published a broad analysis of domestic and global coal markets and export potential out of the U.S. in March 2012, and projected U.S. exports would increase to 500 mtpa by 2030.³⁶ (As a point of reference, in 2012 U.S. coal exports peaked at 125 million tons per year). This analysis was widely distributed within the coal and investor community.³⁷

This bullish analysis and other industry statements emphasized several factors: a) global thermal coal markets would expand from 1.1 billion tons per year to 2.2 billion tons per year by 2030;³⁸ b) India and China import demand would drive the increases;³⁹ and 3) Economic growth and specific additions to coal fired generation capacity were critical to coal industry future.⁴⁰

³⁵http://www.barchart.com/commodityfutures/Coal_%28API_2%29_cif_ARA_%28Argus/McCloskey%29_Swap_Futures_Futures/ITF

³⁶ Wood Mackenzie, *Changing Supply/Demand Fundamentals allow the U.S. to Reduce Dependence on Foreign Energy and Emerge as Important Energy Player*, (Press Release), March 7, 2012.

³⁷ Dan Lowrey, *Woodmac sees half of US coal production exported by 2030*, SNL, March 7, 2012.

³⁸ Arch Coal, Inc., *Investor Presentation*, May 2013, Slide 12.or SNL

³⁹ Greg Boyce, Chairman and CEO, Peabody Energy, *Empowered*, May 15, 2013, Slide 10

⁴⁰ <http://www.wsj.com/articles/india-china-growth-could-aid-coal-rebound-peabody-ceo-says-1415609089>

However, in February 2015, WM⁴¹ downgraded its outlook on Asian demand for U.S. coal exports. WM cited a slowing Chinese economy, a growing divergence between commodity price and market growth versus GDP growth, a change in economic priorities and new policy directions in China policy with regard to air pollution. This all added up to short and medium term problems for U.S. coal producers⁴² looking to export. The company is now projecting that the global thermal market will stay in a condition of oversupply through 2021 (plus or minus), depending on how many new mine projects are actually delayed.⁴³ While still optimistic on long term trends in Asian coal, WM has tempered its enthusiasm for U.S. export potential.

In addition, the EIA's underlying long-term outlook for Asian coal exports has been low and remains relatively stable. The Annual Energy Outlooks for 2012,⁴⁴ 2013⁴⁵ and 2014⁴⁶ start with 2011 baseline figures between 8 and 12 million tons per year (actual was 8.1 million tons) and rise to a range of 21.3 to 22.4 mtpa by 2030. This estimate would support, perhaps, 10 mtpa of new demand. Even when the EIA projected increases in overall U.S. coal exports, its view of Asian demand remained relatively static, lagging other U.S. regional coal producers. In this environment, CONSOL would be competing for market share with six known U.S. coal producers out of the Powder River Basin.

The EIA projects that European imports from the United States will rise between 2015 and 2020 from 22 mtpa to 30 mtpa. CONSOL, like the coal producers in the western United States face increasing competition as domestic coal demand shows only modest, if any increases. For example, Alpha Natural Resources, Arch Coal, Murray Energy, Foresight Energy, Armstrong, Patriot Coal and Peabody Energy all are poised to compete for coal sales in the European markets.

Independent investment analysts overwhelmingly project severe retrenchment in the global thermal coal market.

The four investment perspectives quoted below – from Bernstein Research, Goldman Sachs, J.P. Morgan, and Citibank -- were originally released in June, July, September and October 2013. All four perspectives offer the same point of view: China and India are the primary drivers of global coal markets, and the export market for U.S. coal is under severe stress and is likely to remain so for the foreseeable future. The studies and several actions by these banks and analysts form a consensus that the international coal market is oversupplied. Global coal producers will face low prices and tight margins. Bernstein Research points to the structural nature of the changes stating the trend is not likely to reverse itself. Goldman Sachs says capital shifts from larger mining concerns suggest a significant move away from coal. J.P. Morgan concludes it is not

⁴¹ <http://energyasia.com/blog/china-energy-demand-decoupled-significantly-gdp-says-wood-mackenzie-economist/>
http://www.rigzone.com/news/oil_gas/a/136981/Wood_Mackenzie_Chinas_Energy_Demand_Needs_Review_Amid_Economic_Changes/?all=HG2

⁴² <http://www.woodmac.com/public/media-centre/12526159>

⁴³ Rohan Somwanshi, *Analyst: Sporadic coal mine closures to not enough to rebalance oversupplied market*, SNL, February 17, 2015. (Somwanshi-SNL-Global)

⁴⁴ <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2012&subject=7-AEO2012&table=96-AEO2012®ion=0-0&cases=ref2012-d020112c>

⁴⁵ <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=7-AEO2013&table=96-AEO2013®ion=0-0&cases=ref2013-d102312a>

⁴⁶ <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2014&subject=7-AEO2014&table=96-AEO2014®ion=0-0&cases=ref2014-d102413a>

economic to export coal at present. Citibank concludes that the end of the coal super cycle is here.

These trends will most likely continue as China's need for coal imports diminish. When China buys less coal on the global market, it drives down both demand and price.

Bernstein Research concluded its work in the spring of 2013:

Decelerating power growth and structural weakness in other end markets, combined with more hydro, nuclear and renewables and more coal production and rail capacity in China, add up to the once unthinkable: zero net imports in 2015 and falling Chinese demand by 2016.

Globally, Chinese demand for coal has been the primary driver or the backstop behind every new investment in coal mining over the last decade; the "global coal market" ended with the collapse in price in 2012: regional miners will see almost zero demand in China from 2015.

Once Chinese coal demand starts to fall there is no robust growth for seaborne thermal coal anywhere; developed market demand is weak due to gas, environmental concerns or industrial activity; that leaves just one large structural growth market for seaborne coal: India.⁴⁷

The Bernstein analysis concludes that the global thermal coal market will never recover.⁴⁸ Bernstein correctly predicted that coal imports to China would decline in 2014.⁴⁹

Goldman Sachs' 2013 view of thermal coal markets cast a profile of a weak and declining market:

Earning a return on incremental investment in thermal coal mining and infrastructure capacity is becoming increasingly difficult. In the short term, a sharp deceleration in seaborne demand (we expect average annual growth to decline to 1% in 2013-17 from 7% in 2007-12) has moved the market into oversupply and caused a downward shift in the cost curve; we downgrade our price forecasts to US\$83/t in 2014 and US\$85/t in 2015 (down 13% and 11% respectively) and maintain a relatively flat outlook for the rest of our forecast period to 2017.

Mines are long-lived assets with a long payback period, and investment decisions today are sensitive not just to prices and margins today, but also to projections going well into the next decade. We believe that thermal coal's current position atop the fuel mix for global power generation will be gradually eroded by the following structural trends: 1) environmental regulations that discourage coal-fired generation, 2) strong competition from gas and renewable energy and 3) improvements in energy efficiency. The prospect of weaker demand growth (we believe seaborne demand could peak in 2020) and seaborne prices near marginal production costs suggest that most thermal coal growth projects will struggle to earn a positive return for their owners; in our view, this is reflected

⁴⁷ Bernstein Research, *Asian Coal and Power: less, Less, Less...The Beginning of the End of Coal*, Cover Page, June 2013. (Bernstein)

⁴⁸ Bernstein, *Executive Summary*

⁴⁹ <http://www.bloomberg.com/news/articles/2015-02-06/shipping-costs-test-new-low-as-china-coal-imports-slide-freight>

in the way diversified mining companies are reallocating their capital towards more attractive sectors⁵⁰

Goldman Sachs' price downgrade in 2013 was followed by actual price declines far greater than estimated. Goldman anticipated a price of \$83 per ton in 2014. The average price for 2014 was \$70 per ton.⁵¹ In January 2014 Goldman Sachs sold its stake in a coal port greenfield project in Bellingham, Washington a joint venture with SSA Marine Terminals (40+ million ton per year capacity).⁵²

In October 2013, J.P. Morgan analysts expressed their concerns regarding the ability of U.S. coal producers to access the global thermal coal market: "While the outlook for ILB [Illinois Basin] coal appears stronger than other basins, the region is not immune from the challenged coal market." Further: "Export markets have been crucial in balancing supply-demand in the US; however, depressed international prices appear to have closed the door on new export contracts and could create domestic oversupply."⁵³ In 2014, the company continued to weigh in with its analysis of the global thermal coal trade estimating a decline of U.S. thermal coal exports through 2016 from 49 tap to 36 tap.

It's not economic to export US coal at present, and while some sales are continuing; probably driven by take or pay commitments, we doubt new sales will be signed outside long standing relationships.

US coal exports are falling more quickly now, but with other countries apparently concluding it's easier to drop costs rather than production, seaborne prices are reaching new lows.⁵⁴

In September 2013 Citibank⁵⁵ offered its view identifying broad changes in Chinese GDP, pollution and energy policy, internal country improvements, rising influence of renewables and other energy sources to conclude that coal producer's looking to enter the export market were going to find it very difficult to succeed.

As the range of forecasts for Chinese coal demand is wide, we believe investors should price in higher probabilities of lower coal demand. Optimistic long-dated coal prices may be unsupported. Although lower prices may spur demand growth elsewhere, the demand slowdown in China should more than offset such gains, in our view. Coal exporting countries that have been counting on strong future coal demand could be most at risk. The end of the supercycle should weigh on both the mining and equipment sectors. But sectors that excel at renewable integration, distributed generation, transmission could benefit the most.

In May 2015 Citibank updated its 2013 analysis: 1) lowering long term price forecasts; 2) identifying structural decline in coal demand; 3) projecting declines in Chinese import demand, and a mixed picture in India.⁵⁶ For the United States the report sees continued stress on export

⁵⁰ Goldman Sachs, *The window for thermal coal investment is closing*, Rocks and Ores, July 24, 2013, p.1.

⁵¹ http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1111002388669/829392-1420582283771/Pnk_0115.pdf

⁵² <http://www.reuters.com/article/2014/01/08/goldman-port-sale-idUSL2N0KI00U20140108>

⁵³ Darren Epps, *Analyst: Illinois Basin stable but not immune to coal market weaknesses*, SNL, October 8, 2013.

⁵⁴ http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2014/6/29/37603388-1ecd-419e-8cbd-bd7d51fc5902.pdf

⁵⁵ <https://ir.citi.com/z5yk080HEXZtolax1EnHssv%2Bzm4Pc8GALpLbF2Ysb%2FI21vGjprPCVQ%3D%3D>

⁵⁶ Citigroup, *Coal Survival of the Fittest*, Citi Research, Multi Asset, May 27, 2015, p. 1.

sales and anticipates demand increases for domestic coal in the Powder River Basin and Illinois Basin.⁵⁷

In October 2014, several major investment banks announced they would not provide financing to support a large coal mining and export infrastructure in Australia.⁵⁸ This is one of the largest proposed mining initiatives in the world and it is currently in distress.

Most major U.S. coal producers see weak outlook

U.S. coal exports declined 17% to approximately 100 million tons in 2014, with metallurgical export declines accelerating late in the year. U.S. exports are expected to decline 20 to 30 million tons in 2015, with metallurgical exports falling approximately 10 million tons.⁵⁹

All of the major U.S. coal producers with interests in the seaborne thermal coal market are acknowledging unfavorable headwinds. While all express optimism for the future few have a clear, convincing plan to achieve these objectives.

For example, Arch Coal's recent statements say:

While seaborne thermal markets continue to be challenged by oversupply pressures, power demand continues to increase around the world as countries urbanize and middle class populations expand.⁶⁰

In addition, during Arch's 2014/3rd quarter conference call, management put exports on a back burner, vying instead for greater domestic share.⁶¹

Cloud Peak Energy has also expressed concerns regarding the global thermal coal trade. It has reduced its 2015 outlook.

Although uncertainty regarding China's economic growth rates, environmental regulations, and the strong U.S. dollar are creating headwinds, we expect growing demand in Asia for coal, together with reduced capital investments by producers, will eventually overcome the current oversupply. However, current international prices remain low, and as a result, we have worked with our logistics partners to reduce expected second quarter exports by approximately 550,000 tons.⁶²

Peabody Energy has also acknowledged a significant level of decline in both the metallurgical and thermal global markets.⁶³

⁵⁷ Ibid, p. 30-35.

⁵⁸ <http://www.ieefa.org/wp-content/uploads/2014/10/IEEFA-briefing-Galilee-Financiers.pdf>

⁵⁹ <http://www.peabodyenergy.com/content/120/press-releases>

⁶⁰ <http://news.archcoal.com/phoenix.zhtml?c=107109&p=irol-newsArticle&ID=2012926>

⁶¹ <http://seekingalpha.com/article/2606325-arch-coals-aci-ceo-john-eaves-on-q3-2014-results-earnings-call-transcript?page=6&p=qanda&l=last>

⁶² <http://investor.cloudpeakenergy.com/press-release/earnings/cloud-peak-energy-inc-announces-results-fourth-quarter-and-full-year-2014>

⁶³ Peabody has recently trimmed its outlook of U.S coal sales

<http://www.greenfieldreporter.com/view/story/e43b9b1ad5b4d18ca99073e19092d7bf/US--Earns-Peabody-Energy> and has laid

Most major companies, usually the most optimistic source have publicly acknowledged a much weaker outlook than what is being offered to investors in CONSOL's Form S-1. These companies have been working to export coal for several years with limited success.

CNX's plans for selling coal to "blue chip" power plants in the U.S. face risks

CNX is counting on selling its coal for use by coal-fired power plants in the U.S. The S-1 states that the portfolio of coal-fired power plant customers is made up of high quality plants that are unlikely to be retired:

We have a well-established and diverse, blue chip customer base, the majority of which is comprised of domestic utility companies located in the eastern United States. As of March 25, 2015, the Pennsylvania mining complex's committed and priced contract portfolio, on a 100% basis, comprised 22.3 million tons, 11.8 million tons and 6.7 million tons for the years ending December 31, 2015, 2016 and 2017, respectively, which represents approximately 85.5%, 45.1% and 25.6%, respectively, of total production for the year ended December 31, 2014.⁶⁴

According to SNL's mine database, CNX mines supplied coal to the power plants listed below in 2014, accounting for approximately 24 million tons of coal. Most are long-time customers. The plants with "merchant" status purchased about 50% of the coal. Merchant coal plants currently are considered very weak performers for utilities.⁶⁵ Many are trying to sell the assets, usually for little value.⁶⁶ Others have appealed to have the plants converted to regulated ones.⁶⁷ The Avon Lake, listed below, is being retired as a coal plant (and converted to natural gas),⁶⁸ and NRG, the owner of the Chalk Point plant has announced the plant will retire by May 2018.⁶⁹

Table IV: Coal Plants Receiving Coal from CNX Mines (2014)

Coal Plant	State	Status	2014 Delivered (tons)
Cross	SC	Public Power	2,594,950
Belews Creek	NC	regulated	2,620,020
Morgantown	MD	merchant	2,272,610
Brandon Shores	MD	merchant	2,266,060
Mount Storm	WV	regulated	3,802,870
Homer City	PA	merchant	5,650,310
Roxboro	NC	regulated	1,312,080
Elm Road	WI	regulated	1,698,810
Avon Lake	OH	merchant	856,443
Chalk Point	MD	merchant	969,728

off workers at its Australia operations <http://www.smh.com.au/business/mining-and-resources/us-coal-giant-peabody-to-axe-up-to-210-queensland-mine-jobs-cut-production-20150604-ghgjyg.html>

⁶⁴ <http://www.sec.gov/Archives/edgar/data/1637558/000119312515115045/d896459ds1.htm>, p. 2.

⁶⁵ <http://www.powermag.com/aep-looks-to-sell-merchant-coal-fleet/>

⁶⁶ <http://ieefa.org/category/subject/brayton-point-power-plant/>

⁶⁷ <http://ieefa.org/category/subject/harrison-plant/>

⁶⁸ http://www.cleveland.com/business/index.ssf/2015/04/gas-fired_power_plants_sprouti.html

⁶⁹ <http://www.gazette.net/article/20140827/NEWS/140829307/-1/two-power-stations-to-delay-by-one-year-pulling-plug-on-coal-plants&template=gazette>

Although merchant plants appear to be the most vulnerable to today's weakening markets, utilities across the country are also retiring regulated units at an unprecedented pace, with 187 retirements announced in the past few years. Several of the plants listed above may also be vulnerable to retirement over the next few years, as stricter EPA regulations are enforced. The percentage of coal generated by electricity in the U.S. has dropped from 51% in 2007 to 39% in 2014.

CONCLUSION

CONSOL's investment strategy appears to embrace new coal market realities. The coal market in the United States is shrinking. The problem for CONSOL and other coal producers is how to continue to grow value in the current environment. CONSOL's plan will improve transparency but it will not correct fundamental market forces that are sending U.S. coal production and consumption demand downward, limiting U.S. export potential and keeping a lid on coal prices. The likelihood that CONSOL can maintain its distributions to investors is far more risky than portrayed in this filing statement.

The S1 filing suffers from both technical and substantive weaknesses. It does not adequately portray nor analyze CONSOL's value losses in the recent years. In several places it uses data from EIA and from its consultant Wood Mackenzie in a misleading manner. When corrected, the data shows that the outlook for both domestic and international market growth is severely limited. The short term and long term outlook for coal markets in the United States is not favorable; in fact, it is declining with little upside potential. Finally, the company claims that it sells coal to blue chip coal-fired power plants. This statement is aimed to provide some certainty to investors that its core sales are strong. An initial examination of those plants, however raises red flags worthy of further examination. As noted throughout this paper, declining coal prices threaten the profitability of those coal sales going forward.