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April 6, 2015

Kimberly Sager
Statewide Water Reservation Specialist
Department of Natural Resources
Water Resources Section
550 West 7th Avenue, Ste. 1020
Anchorage, Alaska 99501

Dear Ms. Sager,

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts research and analyses on financial and economic issues related to energy and the environment. A more detailed description of our work can be found in the appendix.

I write to supply comment to the Department of Natural Resources ("Department") in its deliberations on the Chuitna Citizens Coalition application to reserve water within Middle Creek near Beluga, Alaska. This commentary is offered in response to the Department's Notice of Application for Reservation of Water within Stream 2003/Middle Creek (LAS 27340- Main Reach; LAS 27436- Lower Reach; LAS 27437 – Middle Reach), dated February 23, 2015 and the subsequent Extension of Comment Period dated February 26, 2015. The application would reserve the use of the water in support of fishing and natural resource benefits currently enjoyed by Alaskan residents.

The alternative use for this water, proposed by Pacific Rim Coal LLC in another proceeding,[1] is to supply the proposed Chuitna coal mine project. Recently, David Schade, the Department's Chief of Water Resources, linked the two projects and characterized them as "either- or" propositions for the Department.[2]

Summary of Proposed Chuitna Coal Project

The Chuitna Coal Project is a large open pit mining project proposed for the western shore of Alaska's Cook Inlet.[3] The project has been in some form of development since the late 1970's. The current developer is Pacific Rim Limited. The project would consist of a 5,050 acre open pit coal mine, a 12 mile covered overland coal transport conveyor, a 4.5 mile power transmission line, mine access roads, a housing and airstrip facility, and a coal export terminal at Ladd Landing that would rely on a 10,000 foot trestle built into Cook Inlet to load Chuitna Coal onto transport ships destined for Asian ports. The entire project involves land owned by multiple

[1] http://dnr.alaska.gov/mlw/mining/largemine/chuitna/
[2] https://www.adn.com/article/20150224/state-moves-ahead-chuitna-water-rights-filed-strip-mine-opponents
[3] http://www.chuitnaseis.com/documents/Current-Project-Description.pdf

public and private parties, but the mine footprint is within lands owned by the Alaska Mental Health Trust. Pacific Rim holds a lease to mine that property. The full project involves reserves of over 1 billion tons. At full production the mine is expected to produce 12 million metric tons of coal per year, or approximately 268 million tons over the life of the mine.[4] The Army Corps of Engineers (Corps) and other federal and state agencies are in the midst of a permitting and environmental analysis.

The markets for the coal that would be mined from Chuitna are purportedly various countries in the Pacific Rim – China, Japan, Korea, Taiwan and Vietnam. The letter speaks to the short and long term condition of the Asian thermal coal market. We have concluded that the Chuitna coal project is not viable in the current investment climate nor for the foreseeable future.

While Pacific Rim LLC has not published specific financial plans, it is fair to say that a robust Asian coal market is required for a new North American entrant to succeed. However, the project comes at a time when Asian coal demand is slowing, the coal market price structure has collapsed, and the investment consensus (see below) is that an overall decline is likely to continue. The factors influencing the global coal market are described in detail below.

Background on global coal markets

The total seaborne global coal trade (including all types of coal) in 2013 was 1.3 billion tons per year. The global seaborne *thermal* coal trade in the same year, according to the United States Energy Information Administration (EIA), was approximately 1.0 billion tons per year[5] (Chuitna would produce thermal coal).

Table I: 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

Table II: 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/

[4] Pacific Rim Limited, *Minor Air Permit Application*, Table 2.1 Chuitna Coal Mine, Life of Mine Parameters, January 28, 2008. An updated air permit application was filed in June 2013, the Life of Mine information is now considered Business Confidential http://dec.alaska.gov/air/ap/docs/AQ0957MSS03Application061313.pdf

[5] http://www.eia.gov/oiaf/aeo/tablebrowser/

Several important dynamics to consider are:

- Chinese coal imports rose to 327 million tons (tpa) in 2013. However, in 2014, Chinese coal imports dropped to 282 million tons[6] and that level is now likely to drop even further. (Prior to 2008 China rarely imported more than 50 million tons of coal).
- Although much of the coal industry now sees India as the main bright spot for future coal demand,[7] the Indian policy message on imported coal is mixed.[8] India is likely to continue importing coal for next three to five years. Steam coal imports in 2013 were 142 million tons and could rise to 200 million tons in 2015.[9] 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 countries deficit and weakening rupee.[10] The country has considerable domestic coal reserves that have not been handled efficiently.[11] 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.[12] The government has announced its intention to drive down the level of imports. The current minister has repeatedly stated a desire to end India's reliance on imported coal.

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.

Japan, Taiwan and Korea -- the principal sources of import demand of thermal coal in Asia outside of China and India -- represent about 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.

Indonesia, Russia, South Africa, Australia, and Colombia are all sources of coal to Asia, and all have plans to continue to export coal.[13] They exported 860 tap of steam coal in 2013.

These provider nations are not without problems,[14] 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,[15] and 3) they have substantial reserves, which are likely to have extended lives as China and India cut back.

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[6] http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/req/REQ-March15.pdf

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

[8] http://in.reuters.com/article/2014/11/12/india-coal-imports-idINKCN0IW0FJ20141112

[9] http://www.industry.gov.au/industry/Office-of-the-Chief-Economist/Publications/Documents/req/REQ-March15.pdf

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

[11] http://www.dnaindia.com/india/report-importing-coal-unjustified-as-country-has-huge-reserves-piyush-goyal-2071168

[12] https://www.pwc.in/assets/pdfs/industries/power-mining/icc-coal-report.pdf, p.14

[13] 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

[14] 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.

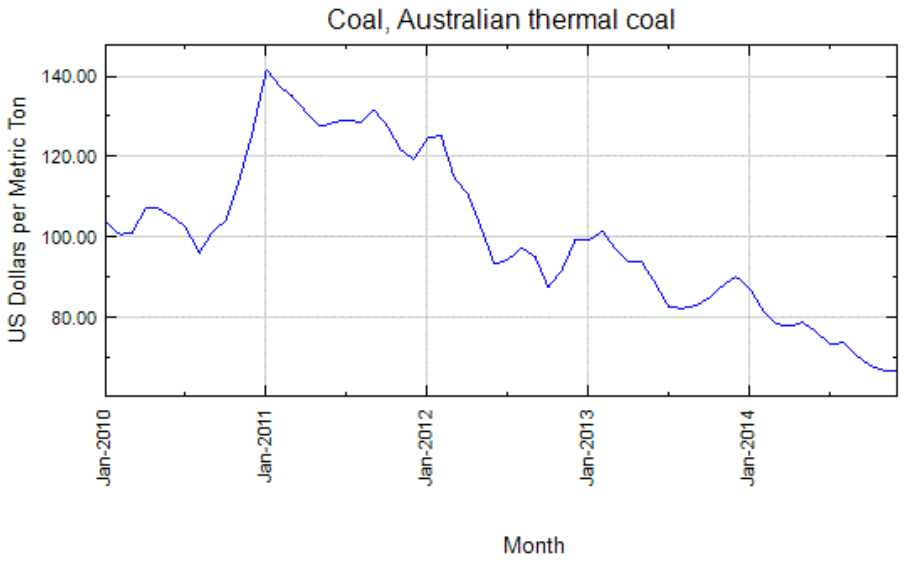
[15] As markets remain constrained Australasia based producers have greater incentives to undercut NA coal producers – ad they have greater negotiating room as distances are shorter. All of the existing import and export relations are established and reflect broader trading and political relationships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

Global coal prices are collapsing 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 Powder River Basin producers and the developers of the Chuitna mine) have no 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.[16] The overall market for U.S. coal producers in the Pacific Rim is likely to get worse.[17]

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.[18] 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[19] (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.

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



Source: Index Mundi.com[20]

[16] http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2014/6/29/37603388-1ecd-419e-8cbd-bd7d51fc5902.pdf
[17] For a detailed analysis of the nature of changes in the global seaborne thermal market as China's 25% market share declines, see: Bernstein Research, 117-124.
[18] 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/
[19] http://www.barchart.com/commodityfutures/ICE_NewCastle_Coal_Futures/LQ
[20] http://www.indexmundi.com/commodities/image.aspx?commodity=coal-australian&months=60

According to one study produced in 2011 by the Center for Sustainable Economy, the Chuitna mine would not be feasible below a coal price of $91.29 per ton.[21]

Two of America's leading coal producers (Peabody Energy in late 2010[22] and Arch Energy in early 2011)[23] 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)[24] and coal producers worldwide were predicting longer term growth from this source.[25] More recently, Cloud Peak Energy stated it would require a Newcastle price between $80 and $90 per ton before selling coal to China.[26]

During 2014, the market for Chinese imported coal and the global coal market more generally cooled (see discussion below) and global prices have collapsed.[27] 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.[28],[29] A new entrant, such as Chuitna, would face competition from Pacific Rim based producers, U.S. coal producers and Alaska's primary producer, Usibelli Mining.

Usibelli mining has also seen reductions in its export sales. In 2011 the company reported peak export sales of 1.2 million tons. The last year for reported export sales is 2013. The company reported the sale of 630,000 tons.[30] For the period 2007-2011 export sales drove Usibelli's growth. Recent reports show the company is expecting another poor export year in 2015 due to weakening global prices.[31] The bad economic news includes layoffs at Usibelli's mine.[32]

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[21] Center for Sustainable Economy, *Net Public Benefit of the Chuitna Coal Project: Preliminary Assessment*, June 2011, p. 2-8. This study assembled a basic cost of production and set of capital cost assumptions based on various models. This was done in the absence of any business plan offered by Pacific Rim LLC. To update this study is beyond the scope of this comment; however the bottom line need for a market price in the $90 dollar range is corroborated by other similar coal industry market presentations. The lack of a business plan prepared by the sponsor and vetted by various Alaskan state officials is a peculiar lapse as the original permit decision is over 23 years old and the current market conditions have substantially deteriorated in recent years.

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

[23] Peter Gartrell, Arch CEO sees $20 range for PRB coal to Asia, Platts Coal Trader1/31/11

[24] http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=1&pid=1&aid=3

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

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

[27] http://www.theguardian.com/environment/2014/oct/22/chinas-coal-use-falls-for-first-time-this-century-analysis-suggests

[28] http://www.carbontracker.org/wp-content/uploads/2014/09/Coal-Demand-IEEFA-complete.pdf

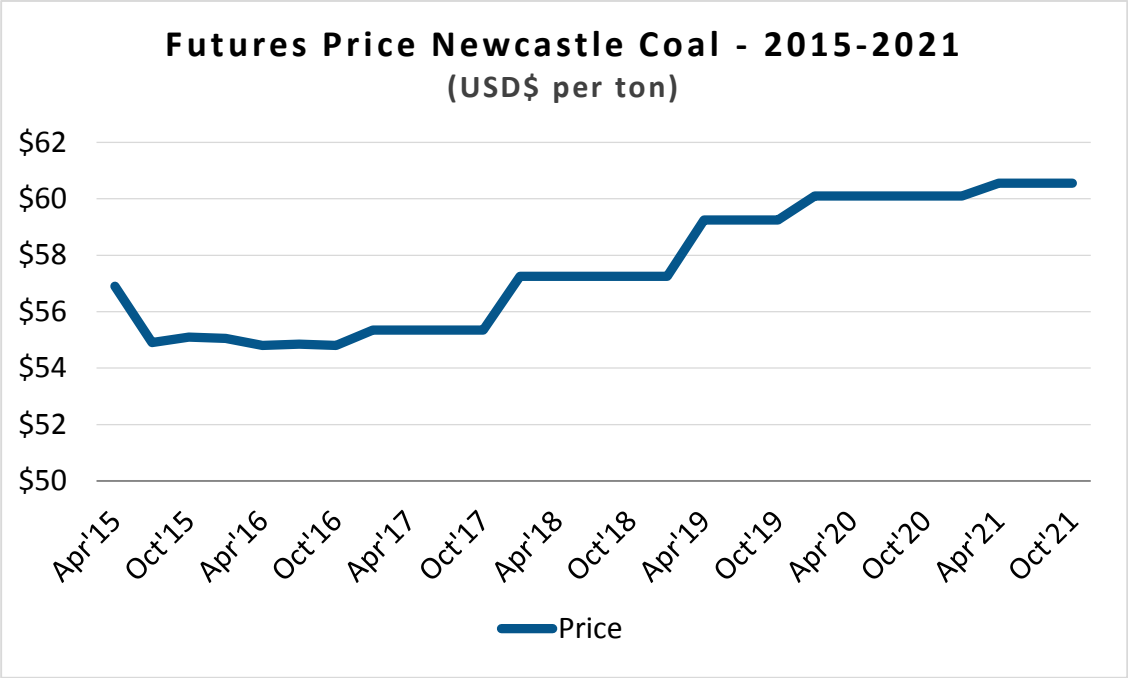
[29] http://www.carbontracker.org/wp-content/uploads/2014/09/Coal-Financial-Trends-ETA.pdf

[30] http://www.usibelli.com/McDowell-Report-Statewide-Socioeconomic-Impacts-of-UCM-2015l.pdf. See page 6

[31] Usibelli's reported 2014 exports are 513,000 tons. See: Alaska Railroad Briefing to Anchorage Metropolitan Area Transportation Solutions (AMATS) Policy Committee, March 26, 2015.

[32] http://www.newsminer.com/business/coal-price-slump-hits-usibelli-coal-mine/article_8fe32ac2-af6e-11e4-8e0a-f79789f09d3c.html

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



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

Leading coal analysts see no market signals supporting new mine development

Like many other analysts, Wood Mackenzie (WM), a prominent global coal consultant has altered its once-optimistic position with regard to the export potential of the Asian market for U.S. producers.

The company published a broad analysis of domestic and global coal markets and export potential out of the U.S. in March 2012. WM projected U.S. exports would increase to 500 tap by 2030.[33] (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.[34]

This bullish analysis and other industry statements emphasized several factors: 1) global thermal coal markets would expand from 1.1 billion tons per year to 2.2 billion tons per year by 2030;[35] 2) India and China import demand would drive the increases;[36] 3) Economic growth and specific additions to coal fired generation capacity were critical to coal industry future; [37] and 4) U.S. market share would rise from 6% to 17% of the world market for thermal coal.

[33] 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.
[34] Dan Lowrey, *Woodmac sees half of US coal production exported by 2030*, SNL, March 7, 2012.
[35] Arch Coal, Inc., *Investor Presentation*, May 2013, Slide 12.or SNL.
[36] Greg Boyce, Chairman and CEO, Peabody Energy, *Empowered,* May 15, 2013, Slide 10.
[37] http://www.wsj.com/articles/india-china-growth-could-aid-coal-rebound-peabody-ceo-says-1415609089

However, in February 2015, WM[38] reversed 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 producers[39] 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.[40] While still optimistic on long term trends in Asian coal, WM has tempered its enthusiasm for U.S. export potential.

SNL Energy maintains a database of coal industry information. It also offers a Coal Forecast consisting of Supply; Demand and Price estimations through 2025 (see Appendix I). SNL estimates for the Powder River Basin (PRB) show largely flat production levels, but declining overall projections for U.S. production. Overall production levels fall through 2025 from 1.008 billion tons per year in 2015 to 999 million tons by 2025. Southern PRB production is flat through 2025 and Montana coal (Northern PRB) drops slightly from 40 tap to 38 tap. Steam coal export estimates remain largely flat in the 44-47 million ton range through 2020 and then drop to 40 million ton per year by 2035 (See Appendix I).

In addition, the United States Energy Information Administration's (EIA) underlying long-term outlook for Asian coal exports has been low and remains relatively stable. The Annual Energy Outlooks for 2012,[41] 2013 [42]and 2014 [43] start with 2011 baseline figures between 8 and 12 tap (actual was 8.1 million tons) and rise to a range of 21.3 to 22.4 tap by 2030. This estimate supports, perhaps, 10 tap of new demand in an environment where there are six known U.S. competitors. 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.

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

The four investment perspectives quoted below were originally released in June, July, September, and October 2013. The perspectives provide qualitative support that the export market for U.S. coal is at present 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

[38] 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

[39] http://www.woodmac.com/public/media-centre/12526159

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

[41] http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2012&subject=7-AEO2012&table=96-AEO2012&region=0-0&cases=ref2012-d020112c

[42] http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=7-AEO2013&table=96-AEO2013&region=0-0&cases=ref2013-d102312a

[43] http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2014&subject=7-AEO2014&table=96-AEO2014&region=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 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.[44]

The Bernstein analysis concludes that the global thermal coal market will never recover.[45] Bernstein correctly predicted that coal imports to China would decline in 2014.[46]

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

[44] Bernstein Research, *Asian Coal and Power: less, Less, Less…The Beginning of the End of Coal*, Cover Page, June 2013. (Bernstein).
[45] Bernstein, *Executive Summary.*
[46] http://www.bloomberg.com/news/articles/2015-02-06/shipping-costs-test-new-low-as-china-coal-imports-slide-freight

> thermal coal growth projects will struggle to earn a positive return for their owners; in our view, this is reflected in the way diversified mining companies are reallocating their capital towards more attractive sectors[47]

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.[48] 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).[49]

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."[50] 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. [51]

In September 2013 Citibank[52] 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.

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[47] Goldman Sachs, *The window for thermal coal investment is closing,* Rocks and Ores, July 24, 2013, p.1.
[48] http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1111002388669/829392-1420582283771/Pnk_0115.pdf
[49] http://www.reuters.com/article/2014/01/08/goldman-port-sale-idUSL2N0KI00U20140108
[50] Darren Epps, *Analyst: Illinois Basin stable but not immune to coal market weaknesses*, SNL, October 8, 2013.
[51] http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2014/6/29/37603388-1ecd-419e-8cbd-bd7d51fc5902.pdf
[52] https://ir.citi.com/z5yk080HEXZtoIax1EnHssv%2Bzm4Pc8GALpLbF2Ysb%2Fl21vGjprPCVQ%3D%3D

In October 2014, several major investment banks announced they would not provide financing to support a large coal mining and export infrastructure in Australia.[53] This is one of the largest proposed mining initiatives in the world that would compete for the same Asian markets as the Chuitna project.[54] The unwillingness of banks to finance this project reflects the view that the markets are oversupplied and will remain so for the foreseeable future.

The Chuitna Coal project faces competition from U.S. Coal Producers

Pacific Rim LLC faces competition from U.S. coal producers. Arch, Coal, Peabody Energy, Cloud Peak, Alpha Natural Resources, First Energy/Gunvor and Resource Capital Funds are all devoting resources to compete for sales to Japan, Korea, Taiwan and Vietnam. These U.S. producers are pressing ahead with plans from two new coal ports in Washington State. These ports would provide coal export capacity of 88 tap. Cloud Peak and Arch also have reserved port space at the Ridley Terminal in Canada. Arch Coal and First Energy/Gunvor are moving forward with mine expansion projects at Otter Creek and Bull Mountain. All of these companies acknowledge headwinds on the export front. Capital markets have reacted negatively to these plans. The SNL Coal Index, an index of leading U.S. coal producers, has lost 69.5% of share value since March 2010.[55]

In the short term there are no signals for new mines in North America, not for U.S. domestic coal or export needs. In the medium term, through 2021, there are also no price or demand indicators that suggest a new mine entrant in the Asian market would be successful. Colin Marshall the CEO of Cloud Peak Energy recently stated that the Japanese and Koreans were looking at coal demand 30 and 40 years from now.[56] This level of speculation reflects a realistic view of the long term global thermal markets. They will not rebound anytime soon.

Within the United States coal producers are currently going through a period of decline and consolidation. For example, 26 U.S. coal bankruptcies have gone bankrupt through 2013.[57] Most of these producers are small and concentrated in the southeast. However, as the coal industry continues to be battered discussion of major reorganizations and bankruptcy among larger coal companies across the United States is a constant issue.[58]

The Chuitna Coal project faces competition from Alaska-based Usibelli mining

Currently, the Usibelli company produces approximately 1.3 million tons of coal annually. In October 2014 Alaska state mining officials granted the company a new permit to mine an additional 500,000 tons per year. Half of Usibelli's historic production goes for exports to Japan, South Korean and Taiwan and the remainder is used in coal fired power plants in Alaska.[59] As mentioned above Usibelli has seen a reduction of 57% in coal export volumes in just three

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[53] http://www.ieefa.org/wp-content/uploads/2014/10/IEEFA-briefing-Galilee-Financiers.pdf
[54] Rohan Somwanshi, *Report: U.S. Banks will not fund Australia coal terminal expansion,* SNL, October 28, 2010.
[55] SNL/Peabody Energy/StockChart/SNL CoalIndex/5 years/March 30, 2015.
[56] Darren Epps, *In interview, Cloud Peak CEO makes case for coal exports business*, SNL, February 10, 2015.
[57] Darren Epps, *Bankruptcies continue to rock coal companies in '13, but hope for the survivors*, SNL, December 5, 2013.
[58] Christopher Coats, *Market value of U.S. coal producers continues to tumble, led by met coal producers,* SNL, March 13, 2015. See also: http://247wallst.com/commodities-metals/2014/05/28/more-bankruptcies-coming-for-top-coal-stocks/
[59] http://www.adn.com/article/20141014/state-grants-permit-usibelli-disputed-wishbone-hill-mine-project

years, down from 1,200, 000 tons in 2011 to just 513,000 tons in 2014. There is every indication that the plan for the coal from the mine is for sale in Asian markets. Current market conditions may require the mine owner to consider competing for sales to Alaskan coal plants.

Conclusion

The Chuitna coal project would serve little purpose in this shrinking market over the next several decades. There is no need for the mine and no price structure to support it.

Sincerely,

Tom Sanzillo
Director of Finance
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Appendix

IEEFA Background

IEEFA's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy and to reduce dependence on coal and other non-renewable energy resources. Among the many research and analytical studies we have prepared, several have relevance in this proceeding.

IEEFA co-authored, with Carbon Tracker Institute, a major study of global thermal coal markets in September 2014. The study, which used proprietary data, is arguably one of the most comprehensive, publicly available reviews of the current global coal markets, and includes country-by-country reviews of macro trends. The report also models future market activity.

IEEFA has also produced studies on coal and coal mining finance in the United States, Australia's Galilee Basin, and India. IEEFA has produced numerous financial studies that cover U.S. coal plants, state regulation of coal plants, federal and state subsidies and competitive energy markets. IEEFA personnel serve as expert witnesses in regulatory proceedings. Over the course of their individual careers, IEEFA personnel have reported or provided expert testimony in most states in the United States on energy and electricity issues.

Biography of Tom Sanzillo

Tom Sanzillo joined the Institute for Energy Economics and Financial Analysis (IEEFA) as director of finance in 2012. His reports on the U.S. coal industry and coal markets have resulted in multiple investigations by federal oversight bodies including the Securities and Exchange Commission, Congress and the Government Accountability Office (GAO) and the cancellation of several proposed coal plants. From 1990 to 2007, Sanzillo served in senior management positions to the publicly elected chief financial officers of New York City and New York State. From 2003 to 2007, he served as the first deputy comptroller for the State of New York. Among his responsibilities was the management of a $150 billion globally invested public pension fund. He continues to write on government and public finance issues, and runs his own company, T.R. Rose Associates. Sanzillo's most recent publication on New York State government and finance is part of the 2012 Oxford Handbook of New York State Government and Finance.