STEAM COAL OUTLOOK 2018 & BEYOND

Introduction

Another year has passed, and looking back it was certainly a year to be remembered. The steam coal market traded at surprisingly high price levels throughout 2017 allowing for very healthy margins for virtually all global coal exporters. The US reappeared with a bang and took significant market share in old (e.g., India) and new (e.g., Egypt) markets. Russian exports went up probably 15+% and Indonesia stopped contracting. China and South Korea led the demand growth while India remained disappointing. Southeast Asia, namely Malaysia, the Philippines and Vietnam, performed well and Pakistan became consistently the 2nd biggest importer of South African coal after India. Price volatility traded as low as 12% and as high as 35+% during the year. This unpredictable market left interesting trading opportunities for those option/derivative specialists (too often speculators) out there. We have seen the news but what do we make of it with a view forward?

Where will the market go? What can we expect for 2018 and beyond? Does coal have a future? Of course, I have a personal opinion, and more I cannot offer here. I will try to draw your attention away from the day-to-day market swings to some of the interesting long-term views for our industry. When I refer to “our industry” here, I do not only mean the world of coal producers but also the world of power generators, cement producers and consumers at large.

Steam coal prices 2002-2017

Source: Schernikau analysis, McCloskey Coal Price Index
For those of you who are not part of the day-to-day coal industry, coal still accounts for about 40% of global power supply, unchanged for many years. This may surprise considering the press during 2017. Coal remains the single largest source of power for the world and will continue to do so for decades to come. Allow me to be very clear, we – the coal industry – absolutely support every new technology that reduces our planet’s dependence on fossils but we are left to do the job that fewer people seem to be willing to do, i.e. produce power for 4h out of every 10h of light on Earth. Those new technologies will take many many decades to be invented and economically and sustainably implemented to allow us humans dispose of the old style but extremely safe and reliable boiler/turbine/generator machinery. Some people have compared our industry to Tobacco, a dying industry that will not be needed very soon – but this fact denied by coal industry leaders. Nothing could be further from the truth. I don’t know much about Tobacco but coal is not used for generating a good feeling or to pass time and be social, coal provides the simple basis for our modern human existence… Energy!

May I remind you that your parents or grandparents lived in a world with 3 Bln people (in the 1950s and 1960s). Today, we are a joyful almost 7,5 Bln inhabitants dreaming of a better life, or better, increasingly realizing that our life is already great the way it is. We can expect another 3 Bln souls join us in the next 30-40 years in the quest of understanding the purpose of our existence. Where will the power come from? Despite the breathtaking speed of new windmill farms and solar installations, they made up...
Your parents were born

World population 1750-2100

Source: Data from 1750-2015 from OurWorldInData.org series based on UN and HYDE. Projections for 2015-2100 from UN Population Division (2015) – UN Medium Fertility Variant

only 4.5% of global power in 2015. Yes, we will all become much more energy efficient; our life will require so much less power because of LEDs, thicker windows, and solar panels on our roofs... but is that true? (Cloud-)Computing alone is likely to consume more power than the 6th largest power consumer in the world (Germany). We are moving to replace oil-based transportation with electricity-based transportation, new technologies to explore our earth, space, and even to explore new ways of producing power will blow our minds... will blow our minds when realizing the amount of energy they will consume. Our waste needs to be treated, water desalinated and synthetic food produced, packaged and transported. No, I do not believe that the average power consumption per capita will drop, quite the contrary, it is likely to increase. So while we Westerners gracefully allow our friends in developing regions such as the Indian subcontinent, Southeast Asia or Africa to consume a bit more power to catch up with the Western standard of living, we want to limit how they produce the power. Is this a realistic request? Hardly, considering the 40% global dependency on coal today and the power required in the next decades. Today, non-hydro renewables account for 7% of global power (1% from solar and 3.5% from wind), and the annual growth of renewables far outstrips that of fossils but will still not nearly meet the new power demand added every year for decades to come.

Industry Opportunities and Challenges

Our industry faces a few interesting questions to deal with. To name only a few

1. New Technologies
2. Geopolitics and industry consolidation
3. Political pressure and resulting lack of investment
4. Lack of investment and resulting supply tightness

I already touched upon a new technology that positively impacts the demand for power and likely also for coal-fired power in the form of electric vehicles (EV). It is expected that power demand will shift towards a flatter daily demand curve because the historically low night-demand will increase to fuel our electric cars and therefore require more baseload. Battery technologies are rapidly developing and will certainly take a significant chunk but this will not be sufficient to potentially power 10-20% of EV car sales in China in the next decade.

New combustion technologies may positively impact the clean production and burning of coal. Other technologies have already reduced the cost of producing solar panels substantially increasing the much needed renewable share.

I will not speak about Trump, North Korea, Syria or China’s President Xi Jinping. Suffice it to say that the geopolitical situation is challenging our Western standard way of thinking centered around “classical democracy”. The future world order will challenge every industry, including mining and power generation. Global companies become more responsible for their own success, super large companies may struggle and social responsibility will be more than just a slogan. Investors and managers alike realize that profits are not all. For coal this may mean that super mergers...
are less likely than spin offs. At the same time, I believe we will continue to see consolidation in our industry. Large coal producers today already exert significant market power as we have seen in 2017 and they may do more so in the future. What I am missing is a coal industry-wide effort to better our world. What do you think of the coal industry actively taking on global waste treatment and thus contributing to the well-being in a meaningful way? Focus money on here and lobby with politics. “We” have the combustion technology and experience.

The lack of investments has already resulted in less new mining projects. Prices have skyrocketed from early 2016 lows but yet no major new mining projects are on the horizon as too many investors are scared of coal. This lack of investment will a) help miners by making more profits because of higher margins but b) in the long term may hurt the industry as coal prices itself out.

Political Pressure and Climate Change

It is a known fact that political pressure and the aftermath of the well-intended Paris 2015 COP21 put tremendous pressure on investors to retrack monies from coal. It appears less well-known that investing in a problem will help solving it while taking away money from a problem tends to make it worse. Honestly, if global society believes that coal is a problem, wouldn’t it make sense to invest in it, improve efficiency, and reduce emissions with the money? By taking money away from coal one will not stop coal but rather put new coal-fired power at risk of being dirtier. I was hopefully able to explain that new coal-fired power is required for many decades to come as there is simply no other way yet to feed billions of new global consumers with power. Average CO₂ efficiency (a proxy for environmental efficiency) has dropped per MWh of coal-fired power in the past decade because of lack of investments. The lack of investment in coal in fact hurts our environment.

I recently read a recommended book called “Mirrors and Mazes” by Dr. Brady, a well written and easy-to-read guide through the climate debate. It summarizes a debate that appears to be settled but is not. Even many large coal and power companies have “given in” to the “lost battle” and accepted the so-called scientific consensus which is none. Thousands of scientists worldwide have spoken out by now and many call the current climate alarmism a serious problem for humanity (see www.CO₂coalition.org for well-researched examples). A former NASA scientist recently called climate alarmism harmful to national security.

Global policy is currently based on computer models that predict up to 6 °C warming of the climate caused by increased anthropogenic CO₂ content. As a result, most politicians believe to be able to change global future average temperature if man-made CO₂ emissions were to be reduced. I would like to note that none of the computer models were able to predict the temperature of the Sea level rises compared to CO₂ emissions

Source: www.sealevel.info based on PSMSL, NOAA, and Expert Reviewer of IPCC Mr. David Burton
past 20 years. How can we then use such models to predict the future and create policies that spend trillions of USD of tax payers’ money while the money is urgently needed to protect our environment from waste and other human perils? Coal-fired power currently accounts for about 25% of global anthropogenic CO$_2$ emissions (the remainder comes primarily from animal agriculture, oil, and gas). Anthropogenic emissions account for 3-5% of total global CO$_2$ emissions (including from natural sources such as oceans, microbes, insects, volcanos, etc.). Prof. Happer, atmospheric specialist from Princeton University, and many other reputable scientists calculate that doubling of CO$_2$ content from today’s levels would at most increase temperatures by about 1 ºC. One of the reasons is that at the present 400 ppm level of CO$_2$, the wavelength bands where CO$_2$ can absorb long-wave outgoing thermal radiation are essentially complete. Based on this data, not much (but some) global warming is possible from an increase in CO$_2$ because not much additional energy is left to be absorbed in that (12-18 micron) wavelength band.

Another little publicized fact about CO$_2$ is that there are substantial benefits to increased CO$_2$ content in the atmosphere and slightly higher temperatures. For example, CO$_2$ is the only source of carbon that plants have access to. Plants are the basis for animal and human life. Thus CO$_2$ is a basic building block for life on Earth, and hardly pollution. Scientists have already measured the significantly increased greening of the Earth because of anthropogenic CO$_2$. If you want to be extreme, you may even say that a clean coal-fired power plant may create more biomass than a large number of newly planted trees. Don’t get me wrong, I am not arguing that mining Earth’s resources is not a problem. I am only arguing that the funds spent on carbon mitigation are much better spent on serious environmental issues such as waste removal and air pollution.

It is time that we start worrying about our environment rather than human-induced climate change. The climate has been changing for millions of years and there were many times in Earth’s history (including during the medieval warm age) were it was warmer than today. Have you noticed that today the press talks more about “climate change” than “environmental problems”? Why do you think did Dr. Patrick Moore, founder of Greenpeace, left his organization and today tries to put people’s attention back to real environmental issues away from climate change? Dr. Moore is board member of the non-profit CO$_2$ Coalition (www.co2coalition.org).

**Expectations for 2018 and Beyond**

Back to the short term, what are my expectations for 2018 and beyond for coal? I believe that we have entered a new period of higher commodity prices, maybe even a small new commodity boom. Coal prices are likely to remain high, significantly above marginal cost of production for most producers. This is good for the producers but not so good for the consumers. It is also not so good for coal’s position overall: the more expensive coal is the more it prices itself out compared to alternative ways of producing power. It is time that large producers start to realize this fact and stop pushing prices too high. Today, in December 2017, many power companies worldwide cannot cover their coal fuel costs, their power off-takes are often fixed and money is lost (see India).

Not surprisingly, I also predict large price swings. This increased price volatility will also directly impact the global coal trade, swing suppliers and swing customers will go and come out of the market as needed in quicker succession. The lack of investment will result in lack of new production capacity coming online. **Coal import demand will increase steadily** and cannot be stopped. But export coal mine capacity has to be kept up. Current export capacity increases from Russia and Australia are theoretically possible but only to a limited extent. Indonesian exports are most certainly curtailed by rising domestic demand over the next decade. Therefore, medium-
term demand growth will outstrip supply growth unless large new mining projects come online in the next 5-8 years. Since we can expect generally higher price levels, such developments are likely to come at the expense of the consumer and coal’s price competitiveness until then.

Indian demand is not likely to change much but medium term, after maybe 5 years, import growth is likely to come back. Southeast Asia, Africa and other developing markets will lead the demand growth outside of India. Chinese imports are too difficult to predict as too much depends on local policy (interest rates, exchange rate policy, the housing market and more) but generally I don’t foresee large import jumps. 2018 imports are likely to ease compared to 2017 at the expense of Indonesian coal.

Overall, I foresee that **coal will regain the interest of financial investors**. Only the political pressure is in its way. I predict an almost golden time coming but let’s watch out and take the threads to our industry seriously. I do hope that the climate debate will take on a more realistic tone and scientists are able to debate the science freely and without being cornered or worse.

I can only repeat that I am missing our industry taking on a more active positive role for our planet’s environment. We are at the midst of it and the **coal industry can make a difference**. Consider this a plea to the larger producers out there to get organized and start acting.

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**ABOUT THE AUTHOR**

Lars has extensive knowledge and experience in the raw material and energy sector. He is a co-founder/shareholder of HMS Bergbau AG and IchorCoal NV, German publicly listed international commodity trading, logistics and mining companies. Lars has founded, worked for, and advised a number of companies in the coal and energy sector in Europe, Asia and Southern Africa.

Lars finished his PhD on the economics of the global coal business and published two industry trade books on the Economics of the International Coal Trade (Springer, available on Amazon) in 2010 and 2016. He is member of various economics, energy and environmental associations including the non-profit CO₂ Coalition.