



US coal: finding value in a tough climate

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*Society discredits coal while heavily subsidizing renewables and promoting gas at great cost to taxpayers in terms of economics and reliability. **Grant Quasha**, CEO and Managing Director of Paringa Resources, gives us a front-line view.*

Paringa Resources is looking for growth in an industry that has been focused on staving off death. Poplar Grove – our first mine – is under construction in western Kentucky and will start production of its high-heat Illinois Basin thermal coal later this year. It will produce around 3mn t/yr and employ 150 hardworking American coal miners. We also have a second permitted and controlled mine that can provide an additional 4mn t/yr.

Our approach is to develop low-cost assets in a basin that has domestic stability coupled with international optionality that provides room to grow significant volumes into the export market. While domestic demand for Illinois Basin coal is flat, it is stable, and high-cost producers closing operations has made space for our production. With the domestic market flat, the international market has become a much larger force in the region and should drive future growth. The Illinois Basin could more than double its exports from the 12mn t shipped in 2017 to close to 25mn t in five-to-ten years. The basin has unique access to freight infrastructure that other coal producing regions do not have, as well as a global customer base that is slowly becoming more sulfur blind – as we are seeing in real time in the Turkish market.



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A millennial question

While there is nothing out of the ordinary about a chief executive outlining his mining company’s plans for the future, it is important to step back and consider how strange this concept could seem to a millennial. “A future? You mean, like, for coal? I thought coal was dead,” they might say. I am sometimes asked what a youngish, reasonably well-educated cave man like myself is doing running a coal mining company, no less developing new mines. Unfortunately for the broader industry, this is a reasonable question.

Today the US coal mining industry produces less coal and feeds a smaller percentage of US power generating capacity than it has since 1979 – ironically, the year I was born. No one has suffered more from this than coal miners. As a measure of the effect, it is worth considering that the total market capitalization of public US coal businesses adds up to around \$12bn. While this might sound like a large sum, when seen in context it tells us that the nationwide industry is worth less than even one pre-profit tech ‘unicorn’ like Flipkart or LuFax.

You may never have heard of Flipkart or LuFax, but I’m sure you’ve heard of BlaBla Car, the French start-up that matches people for car trips based on how much they like to talk. If you are a Bla, you like a quiet trip. Bla Blas like some conversation. If you opt for Bla Bla Bla, you find yourself in the car equivalent of the bar at a coal conference during happy hour. BlaBla Car – which makes no money – is worth more than second-biggest US producer Arch Coal, which provides around 20pc of all coal-fired electricity in the US.

While the millennials and the capital markets think that the coal industry is dead or dying, I like to remember Mark Twain’s great comment – “Rumors of my death have been greatly exaggerated.” This exaggerated perception of coal’s continuing stagnation and potential decline motivates me to prove the doubters wrong. I take

deep pleasure in being an iconoclast – I have always wanted to argue the unpopular side to see if I could make a compelling case. And when it comes to the US coal industry, finding value where others see only despair is an achievement I would like to share with you.

We all know the various headwinds that have buffeted US coal over the past decade – competition from unconventional gas, previously unfettered government regulation and massive subsidies to uneconomic and ineffectual ‘renewable’ resources, among many others. While some of these are real reasons for our industry’s decline, they do not even come close to representing the entirety of the negative sentiment around coal.

A renewable narrative

The fact is that society and the broader markets are following a narrative that discredits coal as a feedstock, subsidizing renewables and promoting natural gas at great cost to taxpayers and ratepayers in terms of economics and reliability. But who benefits if coal declines? The answer is renewable generation technologies and gas, but should this be the case? Renewables are certainly a good thing – we can have electricity while reducing emissions and saving the planet. That’s obviously appealing from an environmental point of view, but I want to know how it is going to work and what it is going to cost. The dirty secret is that renewable generation methods are generally uneconomic, intermittent and dilute. Without storage or backup thermal generation, they don’t work as baseload generation.

None of the above has stopped us from investing in renewables, though. US Congressional Research Service and EIA data show that wind and solar received \$10.3bn in federal tax subsidies in 2013, breaking down as \$5.9bn to wind and \$4.4bn to solar. This total is around 10 times the amount of federal support coal received in the same year. And this understates the impact – on a level playing field of dollars per amount of power generated, wind and solar get 400 times more federal support. That is, the US taxpayer paid \$231 in support of every megawatt hour produced via solar in 2013 while paying \$0.57 for the same amount of power generated from coal. Recent studies estimate the cost of these subsidies between 2016 and 2020 at \$83bn. On the basis of there being 126mn households in the US, each family will pay more than \$650 over this period for these tax breaks.

American families are already paying higher utility prices. Fuel prices have dropped sharply over the past decade, but distorting government policies provide additional wind and solar subsidies, and 29 US states push consumer prices higher by demanding that a certain percentage of all electricity sold comes from wind and solar.

Contrary to the mountain of media coverage of how wind and solar are taking over the

world, solar panels and wind turbines actually make up a very small part of the global energy mix. The global mix breaks down as 81pc fossil fuels, 5pc nuclear and 14pc renewables, according to the most recent data from the EIA. Solar panels and wind turbines contribute less than 0.8pc. A large proportion of the 14pc of renewables in the global mix represents the burning of biomass or, as it was once called, wood. Biomass is 'renewable' purely because more trees can be grown. Much of the global segment represents indoor fuel use in developing economies, and this highly polluting and often deadly practice is something that must be reduced if we are to 'green' the world's energy mix and improve global health outcomes.

What this picture implies is that by 2040 – even if all signatory nations including the US live up to the Paris Agreement – solar and wind will produce less than 3pc of electricity globally, and every 1pc increase in renewable penetration is likely to cost more than \$150bn.

Therefore, as Jim Hansen (Al Gore's climate advisor) once put it, "Suggesting that renewables will let us phase rapidly off fossil fuels in the United States, China, India, or the world as a whole is almost the equivalent of believing in the Easter Bunny and Tooth Fairy."

The price of gas

Gas-fired power generation is the other 'cleaner' and 'cheaper' route offered by the narrative that discredits coal. Gas remains plentiful in the US and is perceived as cleaner in line with marketing that refers to the fuel as 'natural' gas. How would the US coal industry be perceived if someone had branded 'organic coal' 20 years ago?

But as usual the narrative misses the point. In reality, taking all factors into account, gas costs less 'sometimes' and the burning of gas 'sort of' emits less pollutants.

To step back and take stock of the situation we are in, it is important to ask what we really want from a generation feedstock. I would say that there are three basic wishes: we need it to be cheap; we need it to be reliable; and we want it to do as little damage to the environment as possible without disrupting the delivery of the first two wishes.

Renewables fail miserably on cheapness and reliability, but how does gas do on these fronts? It is cheap – sometimes cheaper than coal – but we need to bear in mind that gas prices can be volatile. While unconventional drilling has lowered gas recovery costs sharply, increasing exports and deepening decline curves from unconventional production could make lower prices more temporary than we might think.

Gas plants are reliable – they do not need the sun to shine or the wind to blow – but

they are not truly baseload. They need constant connection to piped gas supply, which is dedicated to home heating before being dispatched to power plants. They are also subject to restrictions or outages that do not affect coal plants, which hold feedstock inventory on site.

Conventionally produced gas emits less carbon when burned than conventionally burned coal. But this is not the whole story, as it does not account for new, more efficient coal plant technology like High Efficiency, Low Emission (HELE) processes. Also, in the US we are fracking for unconventional gas and this - combined with old and leaky pipeline and power infrastructure - makes gas just as much of a potential environmental issue as coal. This is mainly because of methane - natural gas' dirty secret. One ton of methane is 70-100 times more powerful a potential greenhouse gas on a 20-year time horizon than carbon dioxide. Add the massive liberation of gas and methane in the natural course of business to huge issues such as the Aliso Canyon methane disaster and we have a power source that, no matter your view on climate change, isn't really going to make a difference.



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The upside

US coal is not dead, but we are clearly under assault. Like most of us in this industry, I am where I am because I am an optimist. We are beset by considerable challenges, but we should also appreciate some of the positives.

US coal demand has stabilized, and demand for thermal-generated power should start rising alongside increased economic activity, with US GDP growth of 3pc or more likely to drive demand for coal. Europeans are still quietly relying on coal to supplement their intermittent and dilute renewable sources, dozens of new coal plants are being built in Asia-Pacific, and global demand will continue to rise until 2030, aided in part by

demand from industrials and notably metals producers.

On the supply side, coal stocks are low, having been drawn down to levels not seen for five years. Producers have shown strong discipline and are not investing in new production. In fact, they are not even reinvesting in current production capacity. This is either because they can't afford to or because their shareholders are demanding that any excess cash be paid back. As a result, capital budgets for some of the biggest miners are down by around 90pc from recent highs.

The US regulatory environment has improved dramatically, and this should continue to help miners control costs and keep markets open. The federal government has even pushed for subsidies to keep certain baseload coal and nuclear plants open and operating. While I advocate the elimination of all subsidies to all methods of power generation, we do need to push for ways to keep reliable baseload generation online.

The action

Now that we have regained some of our footing as an industry, we need to push forward. Many look at the recent reprieve from a federal US government that has been focused on helping to remove unnecessary regulation and an international market that has recovered to levels not seen since the last boom and say, "This is as good as it gets - just leave me alone. Let me be so that I can mine and sell my coal from this quiet corner." Let's be honest, though - leave me alone and let me be are not real goals. They are dead people's goals.

We need real goals. I can think of three.

1. Continue to push as hard as possible, citing the positives the industry provides in the US and beyond. Be unafraid of protecting our existing fleet and exposing the disinformation that hurts our industry. Support the American Coal Council, the National Mining Association and figures like Bob Murray, all of which hold these core values. We need to be able to fight not only to hold status but also for a future. My approach is data-driven, free market-focused and unapologetic. That being said, we must be consistent and well-grounded in our advocacy. The opposition will take any chink in our armor and use it to expose us as the 'robber barons' we most certainly are not.

Specifically, we need to intervene in all rate cases. The coal industry has tended to assume that investor-owned power utilities are supportive of keeping their coal plants operating. That is no longer the case. With no power demand growth, the utilities can't make more money by selling more power. But they can raise rates by using the excuse of reducing carbon dioxide emissions, retiring depreciated coal plants and building new combined-cycle gas turbine plants - all at the rate payers' expense. Since president Trump's election, the operators of more than 25,000MW of coal-fired generating

capacity have announced retirements – mostly as a result of following this purported logic. We need to work with the industrial consumers – our only remaining allies – to get involved in all rate cases and expose their illogical assumptions.

2. Promote a global view. Coal may be stagnant in the US, but I see demand growing globally over the next 10-15 years. Outside of the US – a cheap gas zone – economics demand the use of coal to enable social progress – and notably in Asia-Pacific. We need to stress the benefits of coal when it replaces other, more polluting fuels.

Actions on this front can include working with our government and our international partners to remove barriers to US exports. For US coal, that means focusing on improving our logistics network. This is more than pushing for new ports on the Pacific coast – it is using our political clout to help gear government efforts and spending toward de-bottlenecking river, rail and ocean access for our exports and working with international consumers to push the acceptance of products that we have in plenty – high-heat, safely mined coal that can be burned effectively with proven, inexpensive scrubbing technology.

3. Promote new technology. This can start with the solid logic underlying the new HELE plants that are being built in Asia-Pacific. We need a similar plant to be built here in the US, and now is the time, with the current administration showing signs of being receptive to such goals. We should be looking more deeply into blue-sky solutions for coal in areas including nano-technology, advanced materials and rare earths. We also need to keep pushing even problematic technology like carbon capture and sequestration, which is massively underinvested compared with renewables.

Concrete action on this front can involve allying our private companies with non-profits – as happens in the UK – and working with the Department of Energy and other government entities to get pilot programs and test plants started.

It is ironic that coal was created in the age of the dinosaurs and that, like the dinosaurs, it has become extinct more than once – first as a home heating fuel, then as steam engine fuel, and now it is under pressure as a generation feedstock. What will the fourth stage of this process bring? This is still unknown, but I know that with cooperation and support this industry will reinvent itself again.

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