

Despite concerns over gas emissions, coal stocks can still do a power of good for investors

Analysts say there is no real energy alternative at present. **Tim Blue** reports

COAL is rising again into the sights of the environmental movement, with vociferous outbursts appearing in several states over its generation of carbon-related gas emissions. Is it a matter for investors to be concerned about?

We asked a range of analysts for their views: Greg Canavan, head of research at Fat Prophets; Andrew Pedler, energy analyst at Wilson HTM and Peter Strachan, independent analyst and author of the StockAnalysis report.

Here are their responses.

Given the concerns over carbon emissions and the use of coal for energy, are coal mining companies still a good investment?

Greg Canavan (Fat Prophets): Despite the valid environmental concerns over coal, it is unlikely that the coal industry will be heavily punished, in the short term at least, for their carbon-emitting ways. Coal is too big an earner for the Australian economy for the Government to impose penalties, and being a big export earner means most of the coal we dig up is burnt overseas. So even if we shut down the industry, the local benefits would be negligible.

From that point of view, we don't see any major regulatory hurdles on the horizon that would diminish coal producers' current high levels of profitability. The bigger question as to whether coal miners are still good investments is, are they still good value? On that front, we think they're reasonable value, although not compelling.

Given the hype that has surrounded the sector recently, we'd expect coal stocks to underperform over the next few months.

Andrew Pedler (Wilson's): Coal has long been perceived as the bete noir by environmental movements, but coal is a source of energy that can be tapped in more environmentally friendly and efficient ways than combustion in a pulverised fuel power station.

There are two main end uses for different types of coal. Metallurgical, or coking, coal is used in blast

furnaces for the chemical coking properties that are needed to reduce iron ore to produce pig iron and steel. There does not appear to be any realistic substitute for the use of coking coal in blast furnaces to make steel. Similarly, there does not appear to be a ready substitute for steel as a building block of economic growth, and in the current growth environment the outlook for coking coal producers is robust.

Thermal or steaming coal is used to generate steam to drive turbines in power stations for electrical power. The proportion of coal-fired power generation in the eastern Australian energy supply mix is an artefact of the available resources. A power station is an asset that normally has a life of 20-plus years, which in most instances involves generation of steam to drive turbines. When planning power stations, the designers had to identify a cost-effective source of heat that could be used efficiently to boil water, and had to be assured of a 20-plus year supply of that. In eastern Australia, until the development of coal-seam gas drill hole completion methods a few years ago, the only real choice was coal.

For new power generation, for the next 10 to 15 years, power industry participants have indicated that the new power station of choice will be a combined-cycle gas turbine, (probably fired by coal seam gas), until carbon capture and sequestration is commercialised, or until alternative power generation sources are shown to be capable of providing base-load power reliably and competitively.

Peter Strachan (StockAnalysis): In the short term, coal miners' shares are likely to weaken along with a general pull-back in the broader resources sector. Resource stocks only peaked in May, six months after the All Ords Index peaked. The proposed carbon emissions trading scheme will create additional uncertainty for investors, which is likely to limit medium-term upside in the sector, but could create strong buying opportunities late in the year.

BURNING QUESTION



“ While public criticism (of coal) is fine, what is the alternative? ”

— Greg Canavan (Fat Prophets)



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Some local coal stocks have interests in Africa and Indonesia. These operations are unlikely to be affected by emissions legislation for many years. Growth in local demand in southern Africa has taken South Africa off the export map and the local utility is calling for about 2000MW of new power generating capacity each year for the foreseeable future, most of which will come from coal-fired generation, requiring the burning of an additional 8 million tonnes of coal each year for at least the next decade.

Aviva Corporation holds thermal coal deposits in Western Australia, where power demand is rising by 130MW a year, and in Botswana, which has more than 500 million tonnes of well-located coal ready to feed that hungry local market through a state-of-the-art power project.

To what extent will coal producers be able to withstand public criticism?

Greg Canavan (Fat Prophets): Coal production sustains many communities and towns around Australia, so I can't see public criticism being too detrimental to the coal producers. Public criticism is fine, but what is the alternative? Wind and solar can't step in and replace coal, and no one wants a nuclear reactor down the road. Plus, politicians in Australia are all economic rationalists and no one would dare suggest sacrificing jobs and economic growth for an environmental cause, especially when lower coal production here in Australia would have little impact on overall

global carbon emissions. I don't see public criticism having an impact on anything more than sentiment. The bottom line is that energy coal (as opposed to metallurgical coal) is the cheapest form of energy. Globally, the cost of coal relative to other energy sources needs to increase to reflect its carbon-emitting nature. The carbon emissions scheme is a decent start but the rest of the world needs to join in. By raising the price of carbon, countries will slowly start to invest in new power generating technologies.

Andrew Pedler (Wilson's): I do not see many alternative energy supporters sitting in the dark at night, sweltering or freezing according to the weather. They too, even while arguing for new-generation power sources, rely on current methods to provide basic needs and comforts until such time as alternative methods are shown to be viable and effective. Since mid-2004, it has been apparent that coal seam gas is capable of competing with coal in power generation. Other alternatives have yet to prove themselves.

Peter Strachan (StockAnalysis): It's not the coal miners who create carbon emissions, it's the customers who burn the stuff. If local consumers want to be able to turn the lights on each night, unless there is some unforeseen and massive technical advance in alternative supplies, coal-fired generation will remain the backstop of eastern Australian generation capacity for many years. A booming coal seam methane industry in Queensland offers the main com-

petition to coal as a power generation fuel. The use of methane-fired power generation delivers at least a four times lower carbon footprint than coal, but the price of natural gas from this source will rise next decade, as proposed LNG plants provide a high-value market. Coal mining is no more energy intensive than any other form of mining. If emitters are to be taxed for the carbon dioxide they create, ultimately the coal mining industry should not wear the majority of the burden. Much of Australia's coal is exported, so no penalty should apply under the Government's energy intensive export proposals. It will be local utilities using thermal coal to produce power that will feel the additional costs, which will ultimately flow through to higher power costs for local consumers.

In light of the public disapproval, what companies would you avoid, and which would you investment in, as an alternative energy producer?

Greg Canavan (Fat Prophets): Conceptually, alternative energy is exciting and we see it as being a very interesting area of investment in the coming decade. However, it's still early days and with many forms of alternative energy either still in their formative stages or reliant on a beneficial regulatory environment, it's tough to call these companies investments in the true sense of the word. There are quite a few different forms of alternative energy renewables like wind, solar and hydro, and then there are emerging forms such as wave technology.

Geothermal power is also interesting but in its formative stages, while coal-to-liquid, or clean coal, technology is becoming increasingly viable with high oil prices.

Highlighting the risk of some forms of alternative energy is the performance of some biodiesel stocks. Companies like Australian Biodiesel Group and Australian Renewable Fuels have had a massive fall from grace in recent years as policy and regulations have moved against them.

An area of interest is nuclear power, which has low emissions but raises big questions over waste storage. Nuclear energy is likely to rise considerably in the next 10-20 years, though, as more nuclear power plants are built around the world. Aussie uranium miners such as Paladin and ERA are a way to invest in this theme.

As far as investment options go, more mature, cash-generating assets tend to be held in vehicles such as Babcock & Brown Wind (BBW), which are usually highly geared. Also, companies like AGL have a sizeable renewable energy portfolio, along with less environmentally friendly forms of power generation. To gain exposure to the pure alternative energy player, the risk profile increases sharply. Stocks in this area include Geodynamics and Petrotherm (hot rock technology), Carnegie Corp (wave technology) and Dyesol (solar)

Andrew Pedler (Wilson's): When it comes down to being certain that the lights will come on when I turn the switch at night, and the sewerage pumps will continue to operate, I will continue to invest in

the cleanest, most cost-effective power generation method that supports healthy Australian economic growth and living standards. Investment in alternative methods of power generation is growing, although according to the stage of development of the proposed methods, a higher risk-reward relationship should be considered. By the time alternative power generation methods prove themselves to be as reliable as the old coal-fired power station (albeit almost certainly at higher cost than is current) it is very likely that coal-fired generation will have reconfigured itself, using clean coal technologies and CCS, and will (according to a number of studies) be cost competitive with other power generation methods, including alternatives.

Peter Strachan (StockAnalysis): Probably the best and safest exposure to coal is via the large conglomerates, such as BHP Billiton and Rio Tinto, which have the resources to manage their markets. Some of the smaller players in South Africa scare me. Management is often thin on experience and the Black Empowerment laws there are a disaster, open to cronyism and corruption. Following the last mining gathering in Cape Town, many local observers returned just shaking their heads as that country spirals into an ever more desperate economic and social malaise, so I'd avoid them in general terms. Having said that, Aviva's project is in Botswana, which has the best political risk profile of any nation in Africa.

Serious alternative energy companies with medium-term revenue potential are few and far between. Geodynamics will eventually get its hot dry rocks power project up and running, but this will remain a cash-consuming toy for at least a decade. Similarly, Ceramic Fuel Cells offers huge potential, but anything like a sustaining cash flow is at least a decade away. There are no local wind power generation equipment makers, so investors will need to go to the US or Denmark for exposure. Local utilities in the sector have been poorly financed and have found the market to be less impressed.

Are coal to liquids technologies sufficiently advanced to be a viable alternative?

Greg Canavan (Fat Prophets): Basic coal-to-liquid technology was pioneered by South African energy company SASOL during the apartheid years as a way of obtaining oil for the economy during the period of trade embargoes. The South African model involves mining coal and then processing it to produce liquids.

The new model being proposed by companies like Linc Energy involves leaving the coal in situ, that is, not mining it, but effectively burning the coal seam underground and collecting the gases generated and then processing them to liquids. The advantage of this process is twofold. Firstly, mining is eliminated — meaning costs are lower, and greenhouse gas emissions are reduced. Secondly, the nasty gases like CO₂ produced from the coal can be reinjected into the ground.

Are they a viable alternative for the coal industry as a whole? No. CTL technology uses lower quality coal to generate fuel. Thermal coal will still be produced to power electricity stations. Public disapproval or not, a viable alternative to coal is still many years away.

Andrew Pedler (Wilson's): Short answer, not yet. Coal-to-liquid is mostly seen as a replacement for liquid fuel (diesel), as used in the transport industry rather than potentially displacing coal or gas as an electric power generation fuel. CTL has only recently become competitive with oil-based transport fuel due to increased oil prices. Oil was abandoned as a fuel for power generation some time ago, mostly in the 1980s, except for the occasional peak load station, most of which have converted, or are converting, to gas. The theory and promise of CTL, UCG and GTL is tantalising but many still question the economics of these processes.

Peter Strachan (StockAnalysis): Coal to liquid processes have been successfully applied in South Africa for decades, but the technology was never set up to be profitable. It was established by the apartheid government to provide essential fuel. The process is a dirty and highly energy intensive operation that may be commercial at \$US120 for oil but has a high capital cost. It may provide part of the short-term solution to power needs, but not in Australia.