



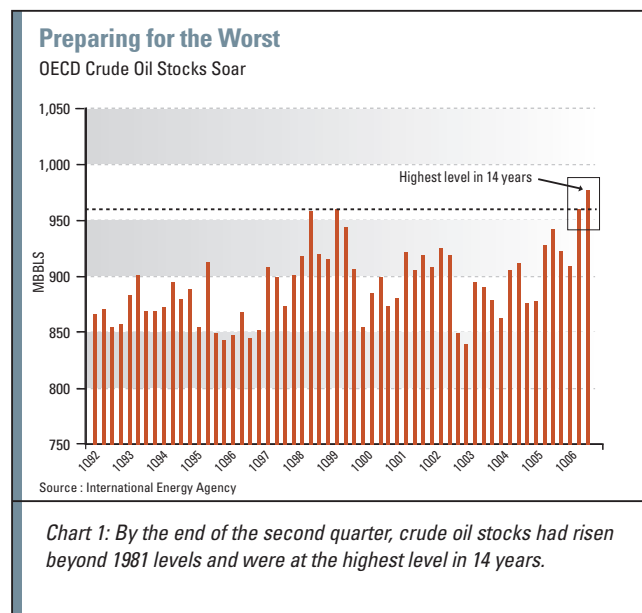
Old King Coal – The Best Hope for Energy Security

At the height of the recent conflict in the Middle East, proponents of the “super-spike” view that the price of oil will move beyond US\$100 a barrel were feeling increasingly confident. Market participants were rightly concerned that an

escalation of the conflict to include Syria and Iran could have resulted in an extended shutdown of the flow of oil from the Persian Gulf.

On the other hand, skeptics about the super-spike view point to a massive buildup in oil inventories that now exceeds what was seen in 1981 and is the largest inventory buildup in 14 years (See Chart 1). That type of inventory buildup could well lead to a sharp drop in oil prices if tensions in the Middle East continue to subside.

Analysts at Bernstein Research recently estimated that the current oil price includes a risk premium of \$27 a barrel above the level that traditional supply and demand and marginal cost fundamentals can justify. They also estimate that net flows of money into oil commodity futures should exceed \$110 billion this year. That makes passive investors in futures the third-largest source of growth in global oil demand, behind only China and the Middle East. The implication: if oil prices start to head down, futures selling could exaggerate the downside move just as futures buying may have amplified the upside.



The one thing that seems most certain is that oil prices are likely to be volatile, with two basic outcomes: Heads, geopolitical tensions escalate and oil prices soar. Tails, tensions ease and oil prices fall.

Of course the “heads/tails” analogy could be misleading if we are not talking about a fair coin with 50/50 odds. We do not have any particular edge in handicapping the odds of renewed conflict in the Middle East. However, we note with



interest that futures contracts listed on www.tradesports.com gave only 18% odds to the execution by the U.S. and/or Israel of an overt air strike on Iran by the end of this year.

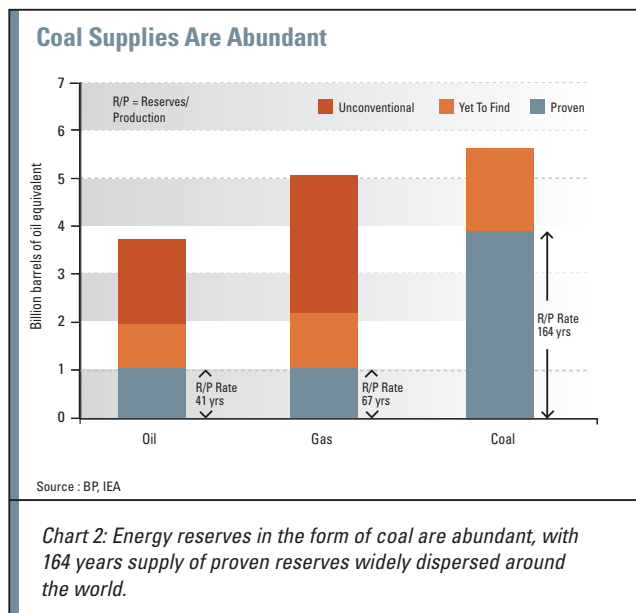
The Case for Coal

Against these daunting uncertainties, is there anything equity investors can do aside from making a bold bet on the direction of oil prices and hoping for the best? Although we believe the odds modestly favour lower oil prices, we also think it is worthwhile to think about what companies will benefit not from the direction of oil prices but from the inherent volatility of the situation.

In that regard, we think companies that will benefit from increasing reliance on coal-fired electricity generation

capacity look especially interesting. Regardless of whether the next move in oil prices is \$25 a barrel up or down, a move toward more coal-fired capacity now looks inevitable as politicians and business leaders alike move away from reliance on oil and gas supplies coming from unstable or unsavoury regimes.

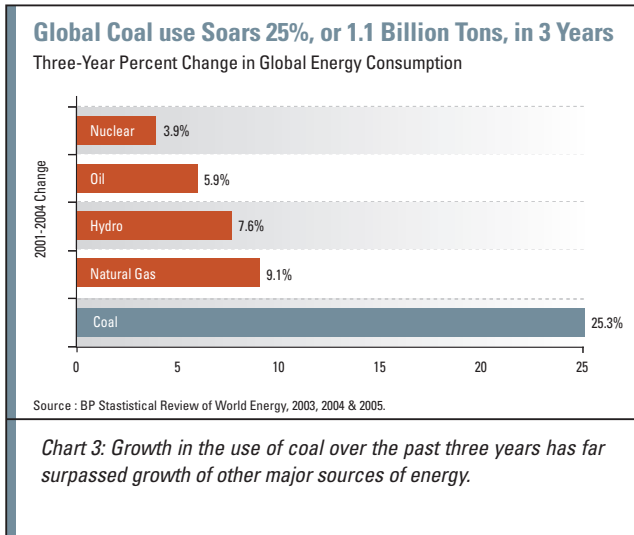
Lost amid the front-page focus on the oil price is the fact that energy reserves in the form of coal are abundant and widely distributed around the world. As shown in Chart 2, there are 164 years of proven energy reserves in the form of coal versus only 41 and 67 years, respectively, in the form of oil and gas. Coal already generates more than half of the electricity in the U.S. and could conceivably play a much greater role worldwide.



A recent study by the Organization for Economic Cooperation and Development (OECD) highlighted the importance of coal to the world's energy future.* A review of this study in the *Financial Times* summarized some of the key issues nicely:

“Does this scenario – of a world in which fossil fuels generate the bulk of commercial energy over the next half century – generate worrying security problems? If one focuses on oil or gas alone, the answer might be yes. In both these cases, the reserves are not located where much of the consumption takes place. The gap is particularly large for

*Richard Doombosch and Simon Upton, “Do We Have the Right R&D Priorities and Programmes to Support the Energy Technologies of the Future?” www.oecd.org/sd-roundtable.



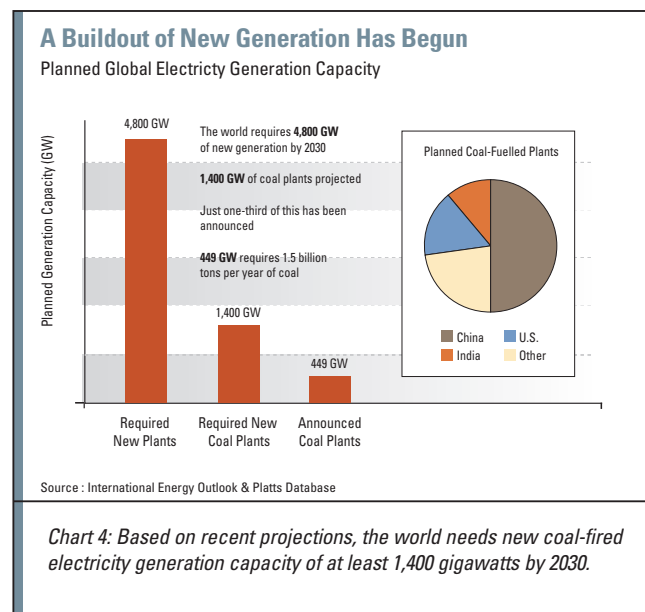
conventional oil: three-fifths of known reserves are in the Middle East. Most gas is piped, which creates an inflexible system. But coal is widely distributed, with much of it in the large consuming regions. The best solutions then for governments concerned with security are diversity of sources and open and flexible world markets.”

As shown in Chart 3, coal use has soared by 25% in the last three years, easily eclipsing the growth in other major sources of energy. And, as shown in Chart 4, a number of coal-fired plants will need to be built in the coming years to meet the expected demand. The construction that has been announced to date will provide only one-third of the required capacity. We suspect that the security concerns discussed above will increase the proportion of coal-fired generation capacity as a proportion of total new capacity for many years to come. The economics of coal over gas are now compelling, with coal-fired electricity generation costing less than one-sixth of the cost of using natural gas.

A major drawback of increased reliance on coal is the environmental concerns. As one engineering publication put it, the trick is how to use more coal “without killing all the fish in Canada.” Cutting down on the harmful emissions can be done by increasing the efficiency of coal-fired electricity generating plants and distribution networks and by using existing technologies to reduce toxic emissions at the source.

Some stocks we own in our portfolios to take advantage of projected growth in new coal plants include the following:

Alstom is one of the leading providers of power generation turbines. The soaring global demand for power has created a profit windfall for Alstom’s key customers – utilities that need to improve efficiency and add new capacity. Alstom has the leading technology and a dominant market share





of coal-fired steam turbines. While Alstom's current demand is driven by orders for gas turbines, any shift to coal-fired steam turbines would provide the company with a significant opportunity to boost top-line growth and margins. Despite a run-up over the last year, the stock is reasonably priced at 16.6 times next year's estimated earnings and only 0.71 times sales.

ABB is a major player in global power transmission and distribution that is well positioned to benefit from global growth in electricity-generating capacity. New capacity is of limited value unless it can be transmitted efficiently to customers and addressing the energy security issues discussed above will require increasingly flexible power transmission networks. The stock has also run up over the last year but still trades at a reasonable 16.3 times next year's estimated earnings and 1.1 times sales.

GEA Group is one of the world's leading providers of cooling towers and emissions scrubbing equipment. These products are critical for permitting coal-fired power generating facilities to operate as efficiently as possible while complying with strict environmental standards. The stock trades at an attractive 13.6 times next year's estimated earnings and only 0.51 times sales.

Even if the situation in the Middle East stabilizes, the world is extremely aware of the risks of further disruptions from that region. With Russia increasingly inclined to use the threat of energy supply interruptions to intimidate

its neighbours, the stakes have never been higher for energy-consuming nations. Barring a massive collapse in oil prices, the trend toward increased reliance on cheap and abundant coal supplies looks unstoppable.

Ironically, the fuel with which the Industrial Revolution began now looks likely to be the key source of energy security for nations which are acutely uncomfortable being held hostage by a few nations who have dominated the Oil Age. Investors can take some solace in remembering that the Stone Age did not end because they ran out of stones!

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