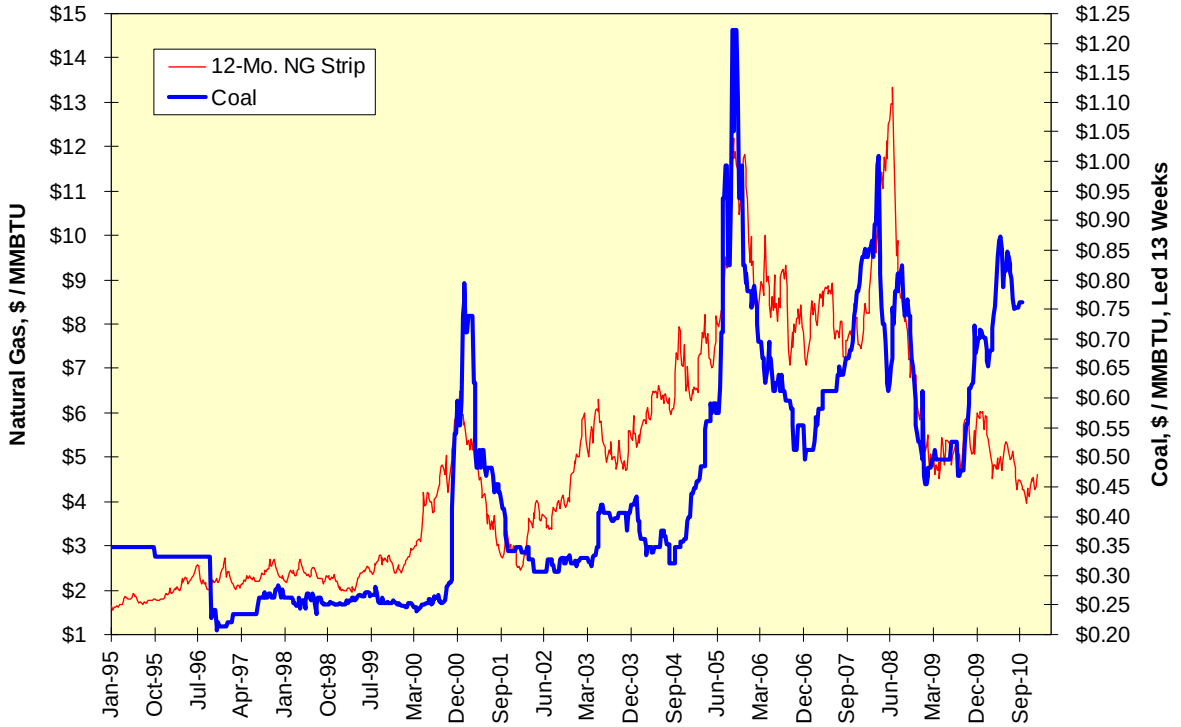
Coal's Natural Gas Problem

We were reminded once again in 2010 of what a dangerous business coal mining is; the death total was the highest since 1992. Like logging, fire-fighting and being a helicopter pilot, it is an intrinsically dangerous business.

We noted yesterday how increased production of natural gas could push the price of that highly inelastic commodity lower in relation to crude oil despite the fervent wishes of all those who seek to link them. What about coal, which competes with natural gas and nuclear power in electricity generation? While natural gas' advocates can sing its praises as being a relatively clean hydrocarbon energy source, no one picks up the hymnal for coal. It is a dirty business at the mine, in transport, in combustion and in disposal of its various waste products, carbon dioxide included.

As many coal contracts involve formula escalator clauses pricing it in relation to fuel oil, natural gas and other energy sources, we can look to natural gas for some pricing clues. A twelve-month strip of natural gas leads Powder River coal, the low-sulfur surface-mined variety produced in Wyoming and Montana, by approximately thirteen weeks.

Coal Not Following Natural Gas Lower Yet

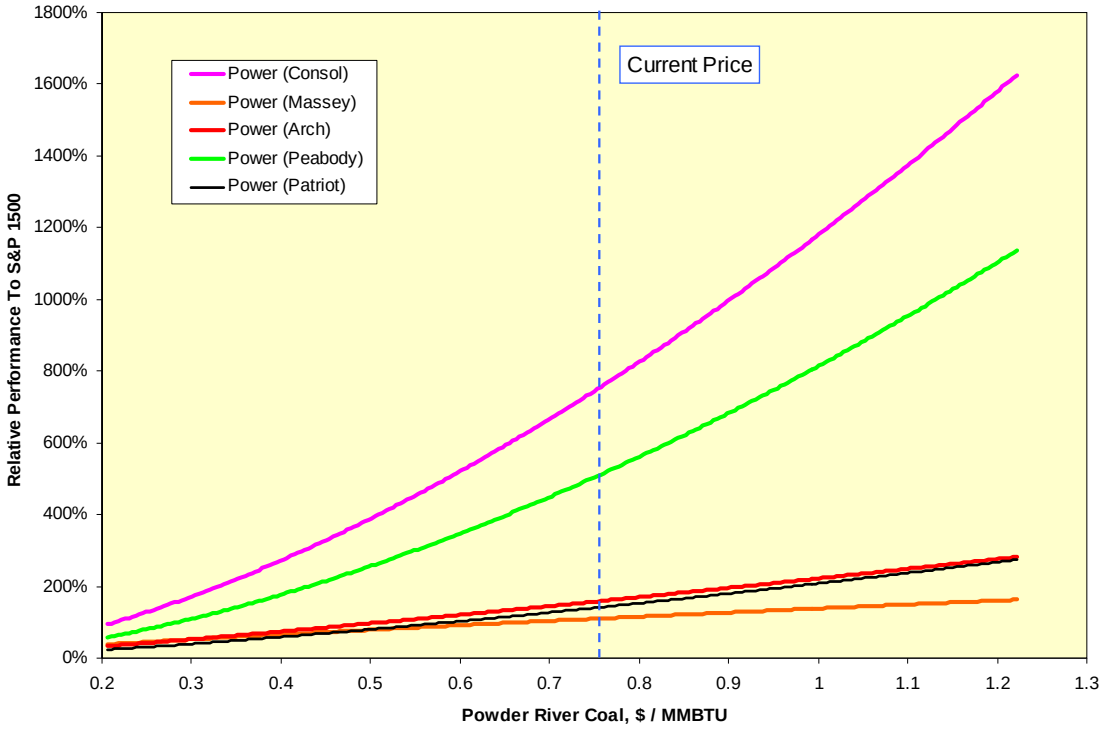


While coal diverged strongly to the upside in the first half of 2010, it is starting to tick downward in relation to natural gas prices. All it takes is a few utilities with dual fuel-use capacity to switch to natural gas to drive coal prices lower.

Equity Impact

Which coal mining firms might be affected most by any price decline? If we map the relative total returns of the five members of the S&P 1500 Coal & Consumable Fuel group against the S&P 1500 itself against the price of coal and display just the power trend curves for clarity, we see Consol Energy and Peabody Coal have the most direct relationship to coal prices. Arch Coal, Patriot Coal and Massey Energy are much weaker plays on coal prices and therefore should be affected less by any subsequent price decline.

Consol Energy & Peabody Energy Capture Coal Price Increases Well



The U.S. remains a dominant world producer of coal and still generates more than 40% of its electricity therefrom. However, this percentage has been declining and will continue to decline in the face of lower natural gas prices. The Energy Information Administration notes:

> *Coal-fired electric generation declined 11.6 percent between 2008 and 2009. With this decline, coal's share of electricity generation reached its lowest level since 1978: 44.5 percent of electricity generation in 2009, down from 48.2 percent in 2008.*
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> *Several factors have worked to erode the advantage that coal-fired generation has historically derived from its lower fuel costs. These factors include lower natural gas prices and higher coal prices; surplus capacity at efficient natural gas plants, and the cost of compliance with current environmental regulations.*
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> *Production at the Nation's coal mines in 2009 reflected the weakened state of coal demand for electricity generation. Appalachian coal production fell 13.0 percent in 2009 from the previous year. Even Western (Powder River Basin) coal production, which has a significant price advantage, showed an 8.1-percent decline in 2009.11*
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> *Natural gas-fired power generation increased by 4.3 percent in 2009, raising natural gas's share of the electricity market to 23.3 percent—its highest share since 1970. Natural gas's share of the electricity market has been greater than the nuclear share since 2006. New capacity, as well as the increased utilization of existing generators (see Table 5.2 on capacity factors), account for the increase in share.*

Until and unless someone comes up with a way to make coal cleaner and safer or until we hit the next natural gas shortage, this trend will continue.