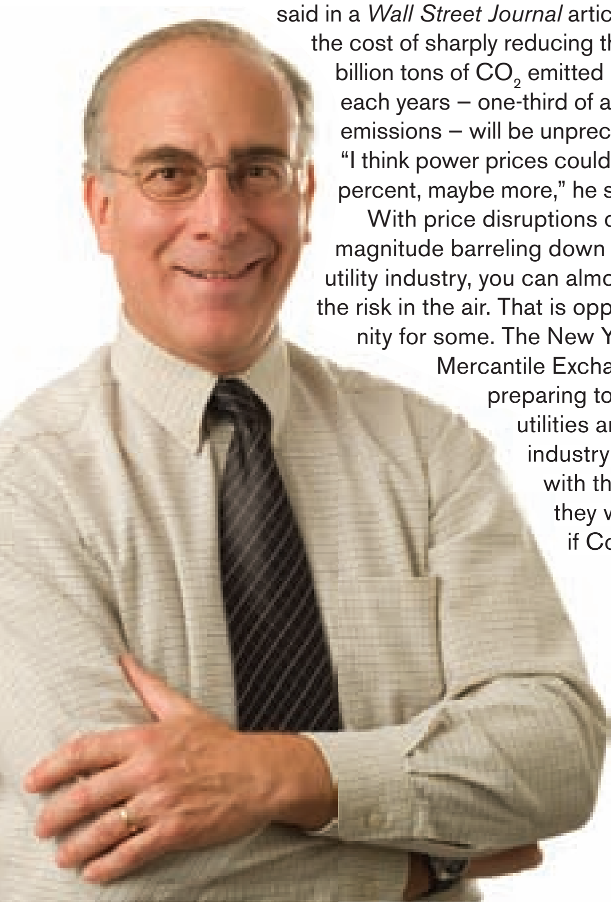
Challenges Facing the Kingdom of Coal

THE TOWERING CHAMBER WHERE coal is combusted in an electricity generation plant is a dark, unsettling, sulfurous place. Elemental coal, wrested from the earth, is here ignited to generate heat, create steam and spin a turbine. Without it, modern life would freeze.

The kingdom of coal provides more than half the electricity we now rely on, and is expected to play an even more dominant role in our energy future. That kingdom faces unprecedented challenges. Global warming has become a huge and growing concern and the carbon dioxide emissions of coal plants are blamed as a leading contributor to the problem.

Steven F. Leer, the chairman and CEO of Arch Coal in St. Louis, one of the major suppliers of coal to the utility industry, believes we need to significantly step up the search for a solution to that problem. “The only way you can be serious about stabilizing CO_2 concentrations is that the United States and Europe invest in carbon sequestration technology, carbon capture technology and get on with it,” Leer told *EnergyBiz*. “We need 10 to 12 years and a meaningful investment of a couple billion dollars a year in these technologies, but we can get there.”

The same morning I talked with Leer, Michael Morris, chairman and chief executive of American Electric Power, said in a *Wall Street Journal* article that the cost of sharply reducing the 2.5 billion tons of CO_2 emitted by utilities each years – one-third of all such emissions – will be unprecedented. “I think power prices could go up 50 percent, maybe more,” he said.



With price disruptions of that magnitude barreling down on the utility industry, you can almost taste the risk in the air. That is opportunity for some. The New York Mercantile Exchange is preparing to help utilities and all industry deal with the risks they will face if Congress, as expected, eventually puts in place a carbon dioxide cap and trade emissions regime. James E. Newsome, NYMEX president and chief executive, told *EnergyBiz* that he believes a futures contract tied to CO_2 emissions restrictions is just 18 months off. It will fast become the largest commodity market, eclipsing even oil futures.

“It’ll be huge,” Newsome said. “It can dwarf oil. Any industry that is creating emissions that need to be neutralized will have the ability to do so through an exchange contract.”

Some estimates put the size of the financial services business now emerging to help deal with emissions issues at $30 billion, on its way to $1 trillion. London is emerging as the global center of carbon finance, given the city’s window on Europe’s early efforts, beset with problems, to curb greenhouse gas emissions.

In an 18th century townhouse on posh Grosvenor Street, across from the Canadian Embassy, Anthony White, a principal of Climate Change Capital, recounted the problems that Europeans encountered when they failed to accurately calibrate the allowed emissions levels of European industry under its cap and trade program. Going forward, particularly after 2012, when the Kyoto Protocol expires, will require the Americans and Australians to get involved, White said. Both have rejected Kyoto because of its failure to address emissions in the rapidly industrializing parts of the Third World. Ultimately, he said, “We need a carbon price people can invest against.”

We know the cost of coal and electricity generated from coal. Once Congress acts, and NYMEX and others respond, the utility industry will have a fix on the true cost of carbon. It will usher in a new age in the utility business and industrial society.

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