Energy Insider by William Engdahl

The economics of nuclear and coal

A recent analysis by a major utility upsets the cost claims of the New York Times.

The prestigious *New York Times* has once again demonstrated its characteristic intellectual dishonesty in an April 12 feature titled "Hard Times for Nuclear Power." The thesis of their former reporter, Anthony Parisi, is worth comment only because it is a calculated fraud based on another fraud by Charles Komanoff, who has just issued a study of the relative economics of coal and nuclear power generation.

Coal-fired generation in 1980 accounted for just over 50 percent of total electricity, while nuclear surpassed oil as number two, with 11 percent of all generated power in the U.S. With no new orders for nuclear plants by any utility in the past two years, antinuclear advocates like the psychedelic Mr. Komanoff, a Harvard whiz kid, are now using economic arguments against building nuclear plants.

Komanoff's latest study argues that "megawatt for megawatt," the cost of building a nuclear plant has risen about twice as fast as the cost of building a coal-fired station from 1971 to 1979. Further, Komanoff asserts, even with cheaper fuel costs, the presumed higher capital costs of nuclear will make it cost 20 percent more than coal by 1988.

I don't intend a diatribe against coal here; if we are to have real industrial growth and capital export to developing nations, we will need nuclear, coal, oil and gas, as well as breeders, reprocessing and fusion. But there is a vicious fraud being perpetrated here.

I spoke with one of the leading representatives of the electric utility industry, Gordon R. Corey, retired vice-chairman of Commonwealth Edison in Chicago. Corey recently completed an analysis for testimony before the Federal Energy Regulatory Commission on March 6, 1981, an economic comparison of nuclear and coal based on the 6 nuclear and 6 coal plants operated by Commonwealth Edison.

Since Commonwealth Edison is motivated by the need to return on their shareholders' investment, they can be assumed to be less biased than Komanoff.

Commonwealth Edison makes their comparison using a three-year availability of nuclear of 79.5 percent against 67.6 percent for coal plants, with an average capacity of 63.5 percent total nuclear capacity to only 45 percent for coal.

This refutes Komanoff's arguments that coal is more "reliable and available" than nuclear. On operating costs, Commonwealth Edison found, allowing for uranium fuel inventory, spent-fuel disposal, and carrying and maintenance charges, that their nuclear-generated system averages 17.3 mills/kilowatt-hour compared to 32.6 mills/killowatt-hour for coal.

Let's take Komanoff's assertion that construction costs for nuclear are escalating twice as fast as for coal. Commonwealth's Corey found that over the last 15 years, costs for *both* have tended to increase about 15 percent per year because of inflation, more stringent licensing, and environmental demands. Further, if inflation continues above 10 percent per year, installed costs for coal will rise even more than for nuclear. Construction costs per killowatt-hour for units to come on line by 1991 will be $2,458 for nuclear, and $2,172 for coal.

The difference is made up for by the cheaper uranium fuel, even with waste disposal costs. While coal costs have risen 600 to 700 percent over the last 15 years, nuclear fuel costs have only tripled (despite a 500 percent increase in yellowcake prices), because of the doubled efficiency in new fuel rods. This does not even take into account that over the past year, yellowcake has dropped from $43 per pound to $27.

Corey conservatively calculates that the cost advantage of nuclear over coal in the future is 15-20 percent. The real problem, he emphasizes, is not Komanoff's numerical manipulations, but regulatory absurdities. The chances for utilities to order nuclear plants will remain "zero, until we get regulations that will enable a better return on equity investment than the present 11 percent, when money costs at least 18 percent."

Right now, utilities have 10 nuclear units ready for startup. They calculate that delays by the Nuclear Regulatory Commission, including delays in final operating permits, will cost consumers $15.5 billion in replacement energy costs while the NRC remains deadlocked. Here, then, is a prime target for presidential assistance to help get things moving again.