

Deputy Assistant Secretary for Clean Coal –James F. Wood



James F. Wood is currently Deputy Assistant Secretary for Clean Coal in the Office of Fossil Energy (FE). In this position, he is responsible for the management and direction of the Office's clean coal research and development programs. Chief among these is the Carbon Sequestration program, the Clean Coal Power Initiative, and FE's \$3.4 billion portfolio of Recovery Act projects.

Wood has over 30 years of experience in the power industry. Most recently, he was president and CEO of Babcock Power Inc. (BPI), one of the major US-based designer/manufacturers of environmental, pressure part, heat exchanger, combustion equipment and after-market services for the power generation industry.

From 1996 to 2001, Wood was president of Babcock & Wilcox (B&W), a \$1.5 billion integrated world-wide provider of boiler-systems and after-market services to the power industry. He was also executive vice president of McDermott International Inc., the parent of B&W.

From 1988 to 1996, Wood was president of WTI International Inc. (WTII) and managing director of Wheelabrator Environmental Systems (WESI). WTII was the international development arm of WESI, a wholly-owned subsidiary of Wheelabrator Technologies Inc. (WTI). WESI is an independent power plant owner-operator with approximately 900 MW of capacity fueled by natural gas, waste-coal, biomass, and municipal solid waste. In 1995, Waste Management Inc. acquired 100% of WTI.

Wood has resided abroad for significant periods of time in Italy, India, Belgium, Colombia, and Ecuador and was responsible for B&W's foreign subsidiaries and ventures in China, Turkey, Egypt and Indonesia. He was appointed to the National Coal Council by three Administrations, and was a member of the US-Egypt President's Council, a federal advisory body to Vice President Al Gore.

Wood is an ASME Fellow and Trustee of Clarkson University. He holds a B.S. in Chemical Engineering from Clarkson and an MBA with a focus on international economics from Kent State University.

Abstract: That Fracking Gas: It Changes Everything.

Over the last 52 weeks, the price of natural gas has varied between \$13/MMB (New York) and \$1.97/MMB (Henry Hub). However, in the Mid-west, Louisiana, Southwest and California, the yearly peak to trough spot prices have been between \$5/MMB and \$2.50/MM, so in many parts of the United States, the price of natural gas sets the day-ahead prices of electricity.

Today, the spark spread (the difference between the price of a MWh of electricity and the cost of the natural gas needed to make that MWh) swings between \$10/MWh and \$20/MWh, ample margin for an efficient gas fired combined cycle at 50% HHV efficiency to consider itself a must run facility.

The low price of natural gas is the result of the successful deployment of risk capital to an extraction technique known as hydraulic fracturing. Subsurface leases in western Pennsylvania, West Virginia, and Ohio have been exploited to produce substantial amounts of natural gas and liquids from shale deposits. These new supplies have reduced the northward flow of natural gas from the Gulf, and reinvigorated the economies of much of the Rust Belt.

These supplies of gas have led to discussions about the cheap production of long chain chemicals, the exportation of LNG, and the substitution for coal of natural gas combined cycle electrical generation. The economics of fuel are only one impact on what is likely to become a long and persistent evolution away from coal. On February 16, 2012, the EPA issued its final Mercury and Air Toxics Standard (MATS), affecting all existing coal-fired generation.. Last month, EPA announced public hearings on green house gas (GHG) regulations for new coal-fired generation. In an understatement, the EPA Administrator opined the cost of these regulations would be zero, and the benefits would also be zero, because "no one will build any more coal-fired generation. The MATS standard is being litigated in the DC circuit, and most observers believe the GHG standard will be litigated as well.

Nuclear power faces its own set of challenges: From TMI, to Chernoble, to Davis Bessie, to Fukushima, public acceptance of nuclear power has predictably waxed and waned at and between crises. The enormous cost of designing, permitting, constructing and protecting a nuclear power plant, as compared with the capital and operating costs of a gas-fired power plant call into question whether the Board of Directors of a public or private company can approve a new nuclear plant or a new gas plant: David Crane at NRG said no; Tom Fanning at Southern Company said yes.

The low price of natural gas is likely to either further stunt the growth of renewable, or, because states all require some level of renewable in their generation mix, require additional public subsidies on the price of renewable power--- or both.

