

Duke Energy

Financial Risks of Continued Reliance on Coal

Whereas:

Electric utility companies that rely on coal face numerous challenges and uncertainty regarding environmental compliance costs, and the cost of carbon capture and storage for coal plants. Declining reserves of high quality central Appalachian coal, unprecedented price increases and coal price-volatility, versus abundant supplies and record low-prices for cleaner burning natural gas, and declining costs for wind and solar energy, make continued reliance on coal increasingly problematic.

Coal combustion for electricity is a major contributor to air pollution, accounting for one third of the nitrous oxides (NO_x), 50% of the mercury, a hazardous air pollutant, and over 36% of the carbon dioxide (CO₂) emitted in the U.S. The U.S. Environmental Protection Agency (EPA) is moving, in some cases pursuant to court order, to tighten regulation of the air, water and waste impacts of coal plants. Pending EPA regulations governing storage and disposal of coal combustion wastes will likely increase operating costs for coal plants. Industry analysts (Bernstein Research, Jeffries & Company, Standard & Poor's, Wood Mackenzie) have concluded that the cost of environmental control equipment may make it uneconomic to retrofit some coal plants.

This unprecedented combination of forces has led Duke Energy, which relies on coal for 62% of its electricity production, to replace some of its older coal plants. The \$1.8 billion, 825-megawatt (MW) unit Duke is building in Cliffside, NC, will help replace about 1,000 MW of older, higher-emitting coal units. Nevertheless, even with these and other coal plant closures, by 2030 Duke will still depend on coal for 28% of its energy.

Although Duke has called for mandatory legislation to cap CO₂ emissions, the lack of national climate policy setting limits on these emissions further adds to the economic uncertainty for coal plants.

Duke's 630-MW coal gasification plant under construction in Edwardsport, IN, could capture 18 percent of its CO₂ within four or five years. Capturing the CO₂ created when coal is turned into a fuel gas, could add 5 percent to 15 percent to the plant's initial \$2.35 billion cost and Duke has sought regulatory approval to study a second step that could capture an additional 40% of the CO₂ at a later stage.

According to some experts, however, "before new methods can be commercialized, projects need three to five years of planning and construction, followed by eight to 10 years of actual pumping of carbon dioxide into the ground." (http://www.nytimes.com/2009/03/17/business/energy-environment/17coal.html?_r=1&scp=4&sq=edwardsport&st=cse) A recent report from the U.S. Government Accountability Office, states that commercial deployment of carbon capture and storage technology for coal plants, is 10 to 15 years away and "would increase electricity costs by about 30 to 80 percent."

Resolved:

Shareowners request that Duke Energy's Board of Directors, at reasonable cost and omitting proprietary information, issue a report by November 2011 on the financial risks of continued reliance on coal contrasted with increased investments in efficiency and cleaner energy, including an assessment of the cumulative costs of environmental compliance for coal plants compared to alternative generating sources.