



“The Contribution of the Coal Fleet to America’s Electricity Grid”

This report, written by PA Consulting Group,ⁱ discusses the contribution of the U.S. coal fleet to the electric grid and the attributes of coal-fueled generation that help maintain the grid’s reliability and resilience. The following are a few of the key takeaways from the report:

The coal fleet provides many of the attributes necessary for grid reliability. These attributes include dispatchability, inertia, frequency response, voltage control and reactive power, contingency reserves, ramp capability, on-site fuel, and generator availability. No single electricity resource has all of the attributes necessary for a reliable and resilient grid, so a mix of resources is the best strategy.

Fuel diversity is critical. The coal fleet helps maintain fuel (or resource) diversity. As the electricity system continues to evolve, the impact of low-probability, high-impact events that threaten grid resilience is magnified. These events include potential fuel supply disruptions and equipment failures. Therefore, resource diversity is necessary to maintaining a reliable and resilient electricity system.

The coal fleet has secure fuel supplies. Over the past five years, coal-fueled power plants had an average of 82 days of bituminous coal and 73 days of subbituminous coal stockpiled on site. In contrast, natural gas-fueled plants rely on deliveries via pipeline, leaving them vulnerable to supply disruptions, especially when low-probability, high-impact events occur. Moreover, at least 30% of natural gas in the Northeast and Mid-Atlantic states is delivered on an interruptible basis.

The coal fleet serves as a hedge. As a hedge, the coal fleet reduces the risk of adverse price changes in other fuel sources, especially natural gas. While natural gas prices are currently at historic lows, natural gas prices can be volatile due to a variety of factors.

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ⁱ PA Consulting Group is a global consulting firm, headquartered in London, with over 2,600 employees with expertise in energy and utilities; consumer goods and manufacturing; defense and security; financial services; government; healthcare; life sciences; and transport, travel, and logistics. The report for ACCCE was prepared by experts in the firm’s Denver, Colorado regional office.