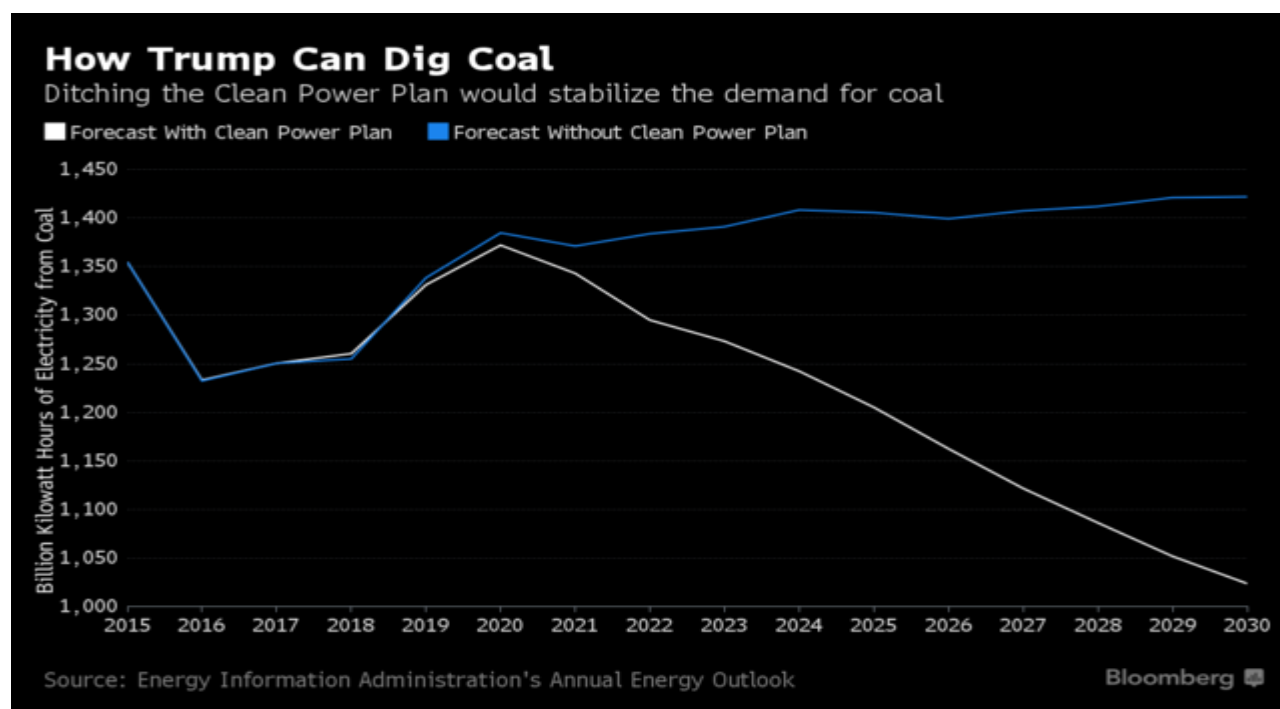


## Government Policies—Not the Market—Key Driver in Power Plant Closures and Job Losses

EPA's Clean Power Plan (CPP) is forecasted to close another 53,000 megawatts of coal power capacity according to the Energy Information Administration (EIA).<sup>1</sup> EIA's 2017 Annual Energy Outlook confirms the dramatic impact of federal policies on the coal industry. Without the CPP, coal becomes the leading source of electricity through 2032.<sup>2</sup> Coal electricity generation would be 49 percent higher in 2040 and annual coal production would climb 20 percent and stabilize at 861 million tons. With the CPP in place, coal electricity generation plunges and along with it coal production falls by 242 million tons—a drop of 28 percent.<sup>3</sup>



Since MATS and other government policies took hold in 2011, almost 64,000 coal miners have lost their jobs.<sup>4</sup> Pulling the plug on the CPP would save 27,700 high wage coal mining jobs along with another 99,700 in the coal supply chain including railroad workers, machinists, mechanics, truckers and other occupations that depend on coal mining.<sup>5</sup>

<sup>1</sup> EIA, *Annual Energy Outlook Early Release: Annotated Summary of Two Cases*, p. 28 (May 17, 2016) available at [https://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2016\).pdf](https://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf).

<sup>2</sup> EIA, *Projected Electricity Generation Mix Is Sensitive to Policies*, (Feb. 14, 2017) available at <https://www.eia.gov/todayinenergy/detail.php?id=29952>.

<sup>3</sup> EIA *Annual Energy Outlook 2017* p. 84 (Jan. 5, 2017).

<sup>4</sup> Mine Safety and Health Administration, *Mine Safety & Health At a Glance Fact Sheet* and quarterly reports.

<sup>5</sup> Direct coal mining jobs derived from Mine Safety and Health Administration's miner productivity data. Support jobs derived from the coal mining sector job multiplier (3.6) in the IMPLAN economic impact model. The average annual wage for coal miners in 2015 was \$83,600. National Mining Association, *The Economic Contributions of U.S. Mining* (Sept. 2016).

The EIA analysis aligns with earlier studies finding that government policies, such as the MATS rule, are the primary driver behind the closing of baseload coal power plants, the decrease in coal demand and lost coal jobs. According to a recent study by the King University School of Business and Economics, government policies are responsible for 105 million tons of lower coal demand in 2015.<sup>6</sup> The study found that the price coal and natural gas until recently explained the relative amount of electricity generated from each fuel. However, the effect of lower natural gas prices diminished substantially after 2012 when new government policies such as Environmental Protection Agency's (EPA) power plant regulations took effect. Government policies accounted for only a modest effect on coal consumption prior to 2013 (20 million tons). Thereafter, actual consumption of coal for electricity generation was well below levels that could be attributed to lower natural gas prices. The analysis estimates that coal consumption for electricity was 105 million tons lower than it would have been without government policies such as the EPA MATS rule.

A Duke University study found several years ago—most of the coal power plant closures are in response to EPA regulations and not lower natural gas prices. Duke's Nicholas School of the Environment found that only 9 percent of the coal power plant capacity was threatened by low natural gas prices.<sup>7</sup> On the other hand, coal power plants comprising 56 percent of existing capacity were threatened by EPA rules. According to the analysis, when the delivered price of natural gas is roughly twice the price of coal—as in 2014—more than 85 percent of the current coal fleet capacity is more economic to run than the **cheapest** natural gas plant. Like the King University study, the Duke University analysis finds that EPA regulations expose consumers to higher and more volatile utility bills by diminishing the sensitivity of electricity generation to fuel costs. According to the Duke analysis, the EPA regulations allow the cost of natural gas to rise to more than four times the cost of coal before most natural gas plants become less competitive.

The policy-driven threat to the diversity of the U.S. electricity generation portfolio carries deep and long-term consequences for the affordability and reliability of the electric grid. IHS Energy quantified the value of a diverse electricity portfolio, anchored by coal, as saving consumers \$93 billion annually while also reducing by half the potential volatility of their monthly utility bills.<sup>8</sup>

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<sup>6</sup> King University, *An Economic and Statistical Analysis of the War on Coal* (July 2016) available at [http://www.king.edu/academics/academicresources/institutes/king-institute-of-regional-economic-studies/kires\\_report\\_data\\_no16\\_july2016.pdf](http://www.king.edu/academics/academicresources/institutes/king-institute-of-regional-economic-studies/kires_report_data_no16_july2016.pdf).

<sup>7</sup> Pratson L.; Haerer, D.; Patino-Echeverri, D. *Fuel Prices, Emission Standards, and Generation Costs for Coal vs Natural Gas Power Plants*. Environ. Sci. Technol., 2013, 47 (9) pp 4926-4933.

<sup>8</sup> IHS Energy, *The Value of US Power Supply Diversity* p. 5 (July 2014) available at <http://www.energyxxi.org/sites/default/files/USPowerSupplyDiversityStudy.pdf>.