Why the U.S. Coal Industry and Its Jobs Are Not Coming Back

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OPINION

Why the U.S. Coal Industry and Its Jobs Are Not Coming Back

President-elect Donald J. Trump has vowed to revive U.S. coal production and bring back thousands of jobs. But it's basic economics and international concern about climate change that have crushed the American coal industry, not environmental regulations.

BY JAMES VAN NOSTRAND • DECEMBER 1, 2016

At a rally in Charleston, West Virginia last May, Republican presidential candidate Donald J. Trump put on a “Friends of Coal” hardhat and declared, “If I win, we’re going to bring those miners back.” More recently, in a telephone call on Nov. 19 with West Virginia’s Governor-elect Jim Justice, President-elect Trump asked Justice to pass along a message to the people of his state: “We are going to get those coal miners back to work.”

As a candidate, and now as the incoming President of the United States, Trump has embraced the “war on coal” narrative that has been a staple of political discourse in coal-dependent regions of the country for the past several years. In West Virginia, billboards along I-79 – paid for by the coal industry – attacked “Obama’s Job-Killing EPA” and proclaimed the region to be “the Obama Administration's No-Job Zone.” This has been a point on which all of West Virginia’s political leaders – of both political parties – could heartily agree: Obama’s Environmental Protection
Agency (EPA) is responsible for the decline of the coal industry in West Virginia and throughout the United States. It would seem to necessarily follow, then, that ending this “war on coal” by electing a new president would result in a stirring revival of the nation’s coal industry.

Unfortunately, that is not likely to happen, and the reasons are straightforward: The economic, political, and geological forces aligned against coal — chief among them the increasing abundance of cheaper, cleaner, U.S.-produced natural gas — dwarf the impact that the federal government’s regulations have had on the coal industry. These larger forces are far greater than Trump will be able to overcome through his promises to “end the war on coal” by “conduct[ing] a top-down review of all anti-coal regulations issued by the Obama Administration,” as stated in his transition team’s plan for “energy independence.” Indeed, Trump’s promised crusade against federal regulations in the energy sector is likely to benefit natural gas producers more than the coal industry, further widening the gap between the two fossil fuel sectors.

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The truth is that voters in West Virginia, Kentucky, Wyoming and other coal-producing states — areas where Trump crushed Clinton with 63 percent to 70 percent of the vote — have been sold a bill of goods by this would-be savior of the coal industry and its mining jobs.

With Trump’s campaign rhetoric now just weeks away from colliding with reality, here are the reasons that coal will never again be king in the U.S.

• **Economics:** Coal is simply not cost-competitive with other fuels in generating electricity — primarily cheap and plentiful natural gas as a result of the shale gas revolution, which has resulted in massive displacement of coal-fired generation by highly efficient, natural gas-fired combustion turbines. Coal has declined from its historically dominant position — from 2000 to 2008, coal supplied about 50 percent of U.S. power generation — to the point where, this year, for the first time, natural gas (with 33 percent of electricity generation) will outstrip coal (with 32 percent) as the U.S.’s primary electricity source, a transition that has occurred far more quickly than anyone thought possible. In addition, the cost of renewables, both wind and solar, continues to decline, and utilities are increasingly integrating these carbon-free sources of generation into their portfolios, to the exclusion of coal plants. In 2015, wind and solar power represented two-thirds of all new electricity-generating capacity in the United States, and in some parts of the country they are cheap
enough to compete with natural gas.

**Geology:** In central Appalachia, the wide and easily accessible coal seams are gone, and coal operators in this region are working their way up the cost curve as they exploit harder-to-reach reserves. Coal from this region is more expensive, and our mines are less productive — not because our miners aren’t working hard, but because of basic geology. Coal production in the central Appalachian Basin in 2015 was 40 percent below its annual average level in 2010-14. In three other main coal-producing regions of the country — the northern Appalachian Basin, Rocky Mountain region, and the Powder River Basin in Wyoming and Montana — production in 2015 was 10 to 20 percent below their corresponding regional annual average levels from 2010-14.

**Climate change:** Climate change is a factor not because our coal-state politicians “get it” and accept the reality of global warming. (In West Virginia, in fact, our political leaders will be debating the existence of climate change until our valleys and hollows are flooded repeatedly due to extreme weather events.) But the world “gets it,” and other nations are not going to be importing any more of our coal. U.S. coal exports fell 23 percent overall in 2015 and have fallen another 32 percent through the first half of 2016. More recently, Canada — the sixth largest market for U.S. coal — announced it would aggressively phase out its coal plants by 2030, or ten years ahead of schedule, in order to meet its commitments under the Paris climate agreement.

**Consumer demand for clean energy:** Many large U.S. corporations have sustainability objectives that are driving the demand for zero- and low-carbon electricity. Cloud-based companies such as Amazon, Google, and Apple, for example, are investing in their own renewable resources to enable their data centers to be powered by “green electrons.” Others — such as Procter & Gamble, Toyota, and Walmart — have varying goals of securing all or a substantial portion of their electricity supply from renewable sources. Energy providers will have to meet those demands in order to do business with these large employers.

It is these broader trends that darken the future of U.S. coal, not over-regulation by the EPA. The EPA has certainly expressed hostility to mountaintop removal coal mining, and with good reason given that the practice involves blasting the tops off mountains and dumping vast amounts of dirt and mining debris into rivers and streams. And the EPA clearly has a desire to address climate change through reducing greenhouse gas emissions. The electricity sector is the largest producer of greenhouse gas emissions in the U.S., and coal is responsible for 71 percent of the emissions in that sector.
As for the impact of the President Obama’s Clean Power Plan — the regulation adopted by the EPA in August 2015 to control greenhouse gas emissions from existing power plants — it will be negligible. For example, modeling performed by PJM, the regional wholesale power market operating in the mid-Atlantic region of the country, confirmed that under a likely compliance strategy of the Clean Power Plan, power prices would increase only about 61 cents per megawatt hour over 20 years — just 1.1 percent of total wholesale prices.

The Trump administration will not be completely helpless in its efforts to revive the coal industry. In addition to walking away from the Clean Power Plan, the transition team’s strategy for energy independence identifies a number of actions the administration plans to take to roll back “anti-coal regulations” adopted during the Obama administration. These include lifting the moratorium on new coal leases on federal lands and abandoning both the Interior Department’s stream protection rule and the EPA’s rule defining the “waters of the United States” under the Clean Water Act, both of which were attacked by coal operators as resulting in increased regulatory compliance costs.

In addition to rolling back environmental regulations and safety compliance (by cutting the number of mine inspectors, for example), the Trump administration will likely take aim at subsidies for renewable energy sources, such as the production tax credit for wind and the investment tax credit for solar, the elimination of which could improve the competitive position of coal versus these non-carbon sources. But these tax measures are already scheduled to expire in a few years. Moreover, in many regions of the country, these renewable resources are already cost-competitive with coal even in the absence of tax preferences, thanks to continuing technology improvements that are producing dramatically declining costs.
Other measures that the Trump administration has promised to take in its rollback of environmental regulations will benefit the natural gas industry, and thus maintain, if not enhance, the competitive economic advantage of natural gas over coal. These measures include the pending Interior Department rule controlling the flaring, venting, and unintended leaking of methane gas on federally owned or Native American lands, and the EPA’s recently adopted regulations requiring reductions in methane gas leaks in the oil and gas industry.

Siting and constructing natural gas pipelines can be expected to get easier, as the Federal Energy Regulatory Commission (FERC) will face pressures to quickly approve the massive build-out of wholesale pipelines associated with shale gas development in the Marcellus and Utica shale regions in the eastern U.S. And FERC may no longer face arguments, originally made by the Obama administration, that any environmental analysis must consider the downstream climate change impacts of additional natural gas consumption enabled by these pipelines.

The problem for the coal industry is that most of these regulation-reducing measures are on the “supply side” of the equation – they marginally lower the production costs of coal operators by reducing regulatory compliance costs. But the fatal forces causing the rapid decline in the coal industry are on the “demand side” – i.e., lack of demand for the product due to cheaper alternatives (natural gas, renewables) and global forces causing a reduction in exports. These are the market forces that are aligned against the coal industry, and they have little to do with government regulations or policies.

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The fact is that the impact of the EPA on the demise of the coal industry was vastly overstated, and dismantling the EPA itself, as Trump promised in the March GOP debates (“[w]e are going to get rid of it in almost every form”), or wiping out the offending regulations identified by coal operators, will do little, if anything, to bring the industry back. Technological advances, which have driven down solar and wind costs and have enabled more gas to be economically extracted, and basic economics – the lower prices charged by competing sources – will prevail over government bureaucrats every time. And as a Republican, isn’t this the outcome that President-elect Trump should want?

Meanwhile, back in central Appalachia and the other coal-dependent regions of the country, the disenfranchisement of a large swath of the population will continue. That means these regions must move decisively to participate in the decarbonization of the electric industry that is rapidly underway – a transition that is occurring with or without EPA actions to regulate greenhouse gas emissions. West
Virginia is fortunate in that it lies atop the Marcellus and Utica shale formations, which makes it feasible to co-fire natural gas with coal in existing coal-fired power plants, or possibly using captured CO2 emissions for enhanced oil and gas recovery in nearby shale operations. Additional investment must be devoted to carbon capture and sequestration technologies, as there will be no long-term role for coal (or even natural gas) in a carbon-constrained world unless heat-trapping emissions can be captured rather than released into the atmosphere.

Coal-dependent states with renewable energy potential – Wyoming’s abundant wind resources, for example – should adopt policies that will stimulate their development, such as renewable portfolio standards that obligate utilities to procure a portion of their electricity supply from renewable resources. Many states are also moving aggressively to capture the economic benefits of the decentralization that is underway in the electricity industry, as an increasing number of customers are generating their own power through distributed generation resources – primarily solar photovoltaics – and controlling their energy usage through demand response and energy efficiency programs.

Capturing the economic benefits associated with this transformation, however, requires leaders in the coal-dependent states to adopt the forward-looking policies that will attract this job-creating investment and will position their states for participating in the clean energy revolution that is currently underway. That strategy, in turn, requires a narrative other than tiresome references to a “war on coal” or blaming the decline of the coal industry on the “job-killing EPA.” It is time for political leaders in coal country to start being straight with their citizens and taking decisive actions to position their states to succeed in the new energy economy. The need for action at the state level is even more pressing, as leadership on these issues will obviously not be coming from Washington under the Trump administration.

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