How Fracking for Natural Gas Became the Terrible New Norm

For 40 years, successful Koch-funded schemes that favor the use of natural gas have meant dire consequences for the environment, consumers and our democracy.

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The following is an excerpt from the new book Frackopoly by Wenonah Hauter (The New Press, 2016):

Over my decades of work in the public interest, I have developed a thick skin. If we are doing our job in the environmental movement, it is par for the course to be sneered at and called names. So when I heard that I had been pegged as "too strident" by the president of one of the largest energy and environment funders in the country, I was hardly surprised, as it has long been an institution that funds groups promoting policies to incentivize natural gas. In fact, I was pleased. I thought: *Yes, it's time to become much more forceful in protecting our threatened planet. It's time for everyone to be strident about keeping fossil fuels in the ground and eliminating the dirty energy technologies of the twentieth century.*

Unfortunately, even as hundreds of grassroots groups are battling to stop fracking, some of the largest environmental groups in the nation and many of their funders tout fracked natural gas as a "bridge fuel" or at least tacitly accept its use. Rather than focusing on an all-out effort to move away from fossil fuels, some of these groups provide cover to the fracking industry, claiming that fracking can be done safely or ignoring fracking's implications for the global climate.

Meanwhile, the communities that are living with the effects of the technology, or the ones fighting the coming wave of fracking and the associated infrastructure, feel betrayed when the place where they live becomes a sacrificial zone—with the implicit approval of some environmental organizations. A closer look at the path that these groups have laid out reveals that it will take us down the road to an environmental and climate disaster. Instead, we should aggressively deploy technologies for clean and renewable resources, reorient the energy system around conservation and efficiency, and leave fossil fuels in the ground, where they belong.

In many ways, fracking looms as the environmental issue of our times. It touches every aspect of our lives—the water we drink, the air we breathe, and the health of our communities—and it

ominously threatens our global climate. It pits the largest corporate interests—big energy and Wall Street—against people and the environment in a long-term struggle for survival. Understanding the impacts of fracking and the policy decisions that have led to this dangerous point in time are key to moving beyond extreme energy.

Recent climate science shows that switching to natural gas is unlikely to reduce greenhouse gas emissions for decades, a crucial time frame for stopping runaway climate disruption. When the entire life cycle of producing natural gas is examined, the damage from methane leakage puts it on par with coal, or worse. The most conservative estimate from atmospheric measurements—not from the inventorying based on oil and gas company data—is that natural gas leakage in 2010, averaged over the country, amounted to more than 3 percent of U.S. production that year. Even if methane leakage can be brought down significantly over time—a debatable scenario—the threat to the global climate in the short term is very real. The rapid transition to natural gas is sending us to a tipping point when climate change cannot be reversed.

Despite the overwhelming evidence of the harms of fracking, the Environmental Protection Agency has thus far ignored the science. Obama's energy secretary Ernest Moniz has close ties with the industry and has claimed that he has "not seen any evidence of fracking *per se* contaminating groundwater" and that the environmental footprint is "manageable." Obama's interior secretary Sally Jewell has bragged about fracking wells in her prior career in the industry and has, despite radical changes in how fracking is done, called it a "an important tool in the toolbox for oil and gas for over fifty years" and even implied that directional drilling and fracking can result in "a softer footprint on the land." And the person charged with protecting communities' water, EPA administrator Gina McCarthy, has claimed that "there's nothing inherently dangerous in fracking that sound engineering practices can't accomplish," all while the EPA has ignored or buried findings that fracking has contaminated water in Texas, Wyoming, and Pennsylvania.

If we are to tackle the enormous threat posed by fracking and the fossil fuel industry, it is crucial to understand how the policy decisions of the last forty years have led us away from sustainable energy and toward a reliance on natural gas. The devil truly is in the details. While many well-meaning environmentalists believe that we are making real progress on renewable energy, the data on the percentage of electricity generated by nonrenewable energy sources tells a different story. Although the emphasis on individual action—putting solar on rooftops—is a step in the right direction, serious policy changes must be made to displace the large amount of energy produced by natural gas, coal, and dangerous nuclear power.

Solar power generated only 0.2 percent of the nation's electricity on average between 2010 and 2014, and wind energy supplied 3.6 percent. If geothermal energy is added to the equation, the renewable share grows to 4.2 percent. Hydropower generates 7 percent of the nation's electricity, but this amount may decrease over time because of the impacts on river ecosystems. Over the past five years, fossil fuels continued to power two-thirds of America's electric sockets. Coal power generated almost 42 percent of electricity, and natural gas generated nearly 26 percent.

Some green groups claimed if electricity was deregulated, renewables would thrive and nuclear plants would be retired, but a close examination of the numbers shows that this has never

happened. Nuclear power has hovered at around 20 percent of electricity production since the 1990s and is expected to increase little if at all. Old plants will be taken out of production over the next twenty years, although if nuclear power is allowed to benefit from cap-and-trade policies, new plants may be built, subsidized by taxpayer money.

Coal electricity has declined from 53 percent of generation between 1995 and 1999 to almost 42 percent over the most recent five years. It will continue to decline as a result of the adoption of the Obama administration's Clean Power Plan—a set of policies designed to replace coal-generated electricity with natural gas. Lower natural gas prices and federal mandates to reduce mercury and carbon dioxide are shifting electricity production toward natural gas and away from coal-fired generation.

Natural gas has been the big winner, with generation increasing every five years since natural gas was deregulated in the 1980s. Natural gas generation has doubled from about 13 percent in the late 1990s to nearly 26 percent in recent years. Natural gas production increased an average of 5 percent a year beginning in 2000.

According to a 2014 report by the EIA (Energy Information Administration), between 2012 and 2040, 42 percent of the total increase in electricity generation will be from natural gas. Coal-fired generation's share of total generation will decline to 34 percent in 2040, while natural gas will rise to 31 percent. But the predictions for renewables are shockingly low, with EIA predicting that solar will still make up 1 percent of electricity generation and wind 7 percent in 2040.

Predictions about energy use are often proven wrong, and the complexity of energy use and production means that changes in policy frequently have many unplanned consequences. But one thing is certain: over the past forty years, the schemes favoring the use of natural gas, and to provide cheap energy to the largest industrial users of natural gas and electricity have proven successful, with dire consequences for the environment, consumers, and our democracy.

The Koch brothers have been major funders of the scheme that has landed us where we are today. Ideologically opposed to any regulation, they also have sought policy changes that would benefit their bottom line— seeking changes in natural gas and electricity policies that would facilitate cutting special deals for cheaper energy, while shifting costs to residential and small-business consumers. David Koch founded the Cato Institute in 1974, one of the think tanks pushing deregulatory policies and working with other right-wing actors such as the Heritage Foundation.

Mindful of the tactics used by public interest groups, Charles and David Koch eventually decided to pursue a similar strategy by founding Citizens for a Sound Economy (CSE) in 1984, leading a grassroots-style campaign to oppose regulation and taxes. David Koch explained of their thinking:

"What we needed was a sales force that participated in political campaigns or town hall meetings, in rallies, to communicate to the public at large much of the information that these think tanks were creating. Almost like a door-to-door sales force."

The fossil fuel industry had been attempting to deregulate the natural gas industry since the presidency of Franklin D. Roosevelt. After three decades of bitter legislative, regulatory, and legal battles, progressive forces lost the long fight over the pricing of natural gas and oversight of pipelines, beginning with the passage of the Natural Gas Act of 1978. By 1990, after a series of deregulatory policy changes, a highly speculative wholesale market in natural gas developed, with Wall Street gambling determining the price that consumers paid for natural gas and incentivizing future natural gas development. The New York Mercantile Exchange (NYMEX), a commodity futures exchange, applied to the U.S. Commodities Future Trading Commission to trade natural gas futures on February 29, 1984, and trading commenced on April 4, 1990.

Between 1985 and 1990, the Federal Energy Regulatory Commission (FERC) had also made deregulatory changes to the rules for moving natural gas from wellheads to end users. Pipeline companies were required to separate gas sales, transportation, and storage services, giving large industrial customers an advantage and creating an incentive to build more pipelines. The deregulatory policies spurred a frenzy of pipeline construction that has continued unabated through the fracking boom, creating widespread habitat damage and posing safety risks. Between 1984 and 2014, gas companies added at least 936,000 miles of pipeline—about 85 miles every day—and there are now 2.5 million miles of transmission, distribution, and gathering lines.

Further, thousands of miles of unregulated high-pressure pipelines with much larger capacity for transferring natural gas to processing facilities— referred to as gathering lines—have proliferated since fracking, although no cumulative record of the mileage exists.

The radical changes in the rules governing the natural gas industry inspired a ferocious lobbying campaign to make similar changes to the electric industry, changes that would eventually drive the use of natural gas for electricity. Breaking up the $200 billion (more than $300 billion adjusted for inflation) electric industry offered an opportunity to create a battle of titans, as they fought among themselves over the rules that would benefit their particular economic interest. Using a politically loaded vocabulary to win converts, they claimed that it would unleash competition, broaden consumer choice, and lower the cost of electricity.

Spearheaded by institutions affiliated with the Koch brothers, including CSE and the Cato Institute, a politically powerful coalition emerged in the 1990s to restructure the electric industry. Large coal utilities like American Electric Power Inc., and natural-gas-power marketers—companies like discredited and bankrupt Enron—were at the forefront of the lobbying machine to transform the electric industry. Proponents of deregulation sought to separate power generation from transmission and distribution, creating an unregulated wholesale market where middlemen could speculate on buying and selling electricity. Wall Street—investment houses, rating agencies, and financial analysts—fueled the drive to make electricity another tradable commodity. The changes that they wrought created a market where power producers, retailers, and other financial intermediaries could speculate on short-and long-term contracts for electricity. After deregulation, the marketplace was supposed to be self-governing, begetting cheap and reliable electricity.

The turning point began in 1992, when C. Boyden Gray, the White House counsel to President George H.W. Bush, engineered the inclusion of provisions in the Energy Policy Act of 1992 that

fast-forwarded electricity deregulation. Gray, a millionaire heir to a tobacco fortune, has been closely affiliated with the Koch-funded front groups throughout his long career as a corporate lobbyist, presidential adviser, and U.S. diplomat. Concealed within the compromise legislation was language removing important limitations on the ownership of electricity generation, which had protected consumers. It also authorized FERC to issue orders that changed the structure of the electric industry over the second half of the decade, creating a casino-like atmosphere in the wholesale electricity market and driving construction of new gas-fired power plants. The FERC orders allowed states, if there was the desire, to rewrite the rules by which residential and small business purchased electricity.

The natural gas industry, led by Enron, launched a massive lobbying campaign to "unleash market forces," pushing for even more deregulation at the state level. Claiming that a new era of competition would replace bloated and inefficient utilities with lean and mean power marketers like Enron, California became the first state to succumb to the rhetoric, allegedly giving consumers a choice about their electricity provider. The large investor-owned utilities wrote the legislation, however, protecting their favored economic position. Between 1999 and 2001 a small cartel of energy companies was able to use the new layer that had been created between the producing and distributing of electricity to make billions of dollars by price-gouging consumers. Californians were overcharged by almost $25 billion during the first five years of deregulation, as power marketers manipulated electricity supply and natural gas prices, causing a series of rolling blackouts throughout the state. In the end, California and several other states that had deregulated this essential service instituted some form of regulation again.

CSE, Enron, and the other advocates of state-based deregulation had pushed for federal legislation that would force states to forsake cost-based regulation, which limits energy company profiteering. According to the Center for Responsive Politics, the powerful coalition promoting electricity deregulation spent $50 million between 1998 and 2000 on lobbying to change the rules under which electric utilities operate. Although the calamity in California set back industry efforts to pass federal legislation compelling states to restructure the electric industry, new efforts are afoot to push this agenda.

In the meantime, the creation of the wholesale electricity market has led to a dramatic increase in natural gas–fired electricity, making the fracking industry one of the biggest beneficiaries of the Federal Energy Regulatory Commission's deregulatory changes. Although companies must go through a weak permitting process that varies depending on each state's rules, no calculation of how the plan fits into a national plan for reducing pollution is made. And since the Obama administration's Clean Power Plan leaves decisions to the states, no overall examination is done on the impacts to our global climate.

Advocates who warned against the unintended consequences of electricity deregulation—both for the environment and for consumers—were ignored or scorned. Foreshadowing the future support for fracked natural gas, influential foundations and public interest advocates signed on to the efforts to deregulate electricity. Without a large grassroots campaign, the green groups negotiated from a very weak position. They naively bought the argument that, by compromising, deals could be cut to expose dirty power plants to competitive forces, and that sustainable energy would be the winner.

These same groups failed to oppose the elimination of a 1935 law, the Public Utility Holding Company Act (PUHCA). Restricting speculative ventures with ratepayer dollars and restraining electric utilities from operating outside of the geographic area that they served, this obscure law offered major protection to consumers and limited the already significant political power of the electric industry. It was repealed in the Energy Policy Act of 2005, at the same time that fracking was exempted from national environmental laws. This has created a handful of enormous electric utility companies that dominate political decision making about energy-related issues.

The chilling predictions about PUHCA's elimination are tragically coming true as the electric corporations consolidate at a rapid rate. Eugene Coyle, formerly an economist at the California utility watchdog group TURN, predicted in 1997, "What we are looking at is the shift from a situation where there are more than a thousand utilities nationwide, over which rate-payers have some control, to a future where there will be perhaps 10 big power companies operating free of regulation and acting like the oil cartels of old."

Reversing bad energy policy and banning fracking will take a massive grassroots mobilization that holds accountable Democrats and Republicans alike and that takes power back from the Koch brothers and their ilk. It means challenging the entrenched political establishment that grovels to the dirty energy industry and facilitates its ability to operate without suffcient oversight, transparency, or accountability. It means working shoulder to shoulder with the brave activists across the country who are challenging extreme energy rather than worrying about the opinions of mainstream funders or other institutions that have close ties to dirty energy. With mounting evidence about the harms of fracking, and the immediacy of the impending climate crisis, it is time for the major green groups to fight for a transition to real sources of renewable energy and energy efficiency, not to depend on market-based schemes with no track record of working.

We can and we must build the political power to change the course of history—our survival depends on it.