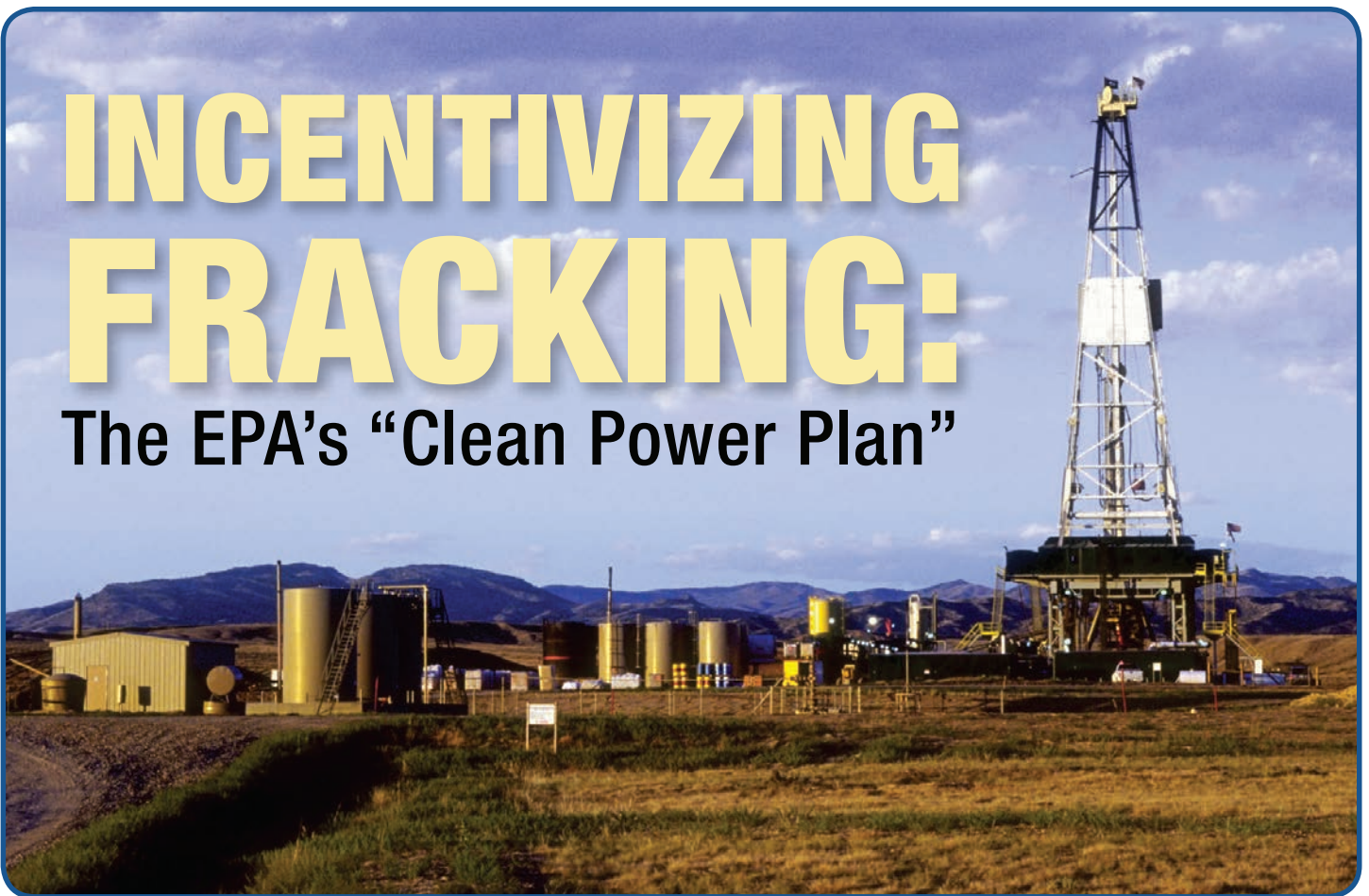


INCENTIVIZING FRACKING:

The EPA's "Clean Power Plan"



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On June 2, 2014, the U.S. Environmental Protection Agency (EPA) released a new "Clean Power Plan."¹ The plan aims to cut the nation's carbon emissions 30 percent below 2005 levels by 2030.² The plan, with its reliance on cap-and-trade schemes and state market solutions, along with woefully unambitious carbon goals, is far from what is needed to actually make a difference on climate change. But just as important, the plan will lead directly and indirectly to a continued drive to increased dangerous hydraulic fracturing, or fracking, for natural gas.

The U.S. electrical power grid has gone through a radical shift in the last 10 years. The amount of electricity that utilities generate from coal has declined by 19.8 percent.³ At the same time, natural gas electricity generation has increased by 56.8 percent.⁴ This has been driven, in part, by relatively inexpensive fracked natural gas.⁵ As coal-fired electricity has shrunk, it has been replaced in large part by natural gas.

The current trends toward more natural gas use are expected to continue. U.S. government projections expect natural gas combined-cycle electrical generation to grow by another 69.8 percent by 2040, even with no changes in the law.⁶ The EPA's plan relies on this changeover, and hopes to accelerate it.

The EPA expressly plans on increasing the amount of electricity that the United States generates from natural gas, naming it as one of the four measures to be used to reduce carbon emissions from the energy sector.⁷ Natural gas electricity would be 18–19 percent higher by 2030 under the EPA's plan than it would be without the plan.⁸ If we are to believe the EPA's projections, electricity generation is based on natural gas for as far into the future as we can see.

Unfortunately, that natural gas comes from fracking. In 2012, 60.6 percent of U.S. natural gas production came from tight gas and shale gas, both products of fracking.⁹ By 2040, some projections are for U.S. shale gas production to almost triple,

increasing by as much as 177 percent.¹⁰ At the same time, domestic tight gas production could almost double, increasing by almost 96 percent.¹¹ Together, those two sources are expected to produce 80 percent of the total domestic supply of natural gas.¹²

According to the U.S. government's best projections, then, America is planning on a future built on electricity from natural gas, and that natural gas is going to come from continued and expanded fracking. We can't afford the environmental and social implications of that future.

Switching from coal to natural gas will not deliver the climate change benefits necessary to prevent catastrophic climate change. Methane is the main component of natural gas, and it is leaking into the atmosphere at approximately one-and-a-half times the rate estimated by the EPA.¹³

While methane degrades more quickly in the atmosphere than carbon dioxide, pound-for-pound it is more efficient at trapping heat.¹⁴ The Intergovernmental Panel on Climate Change (IPCC) now estimates that a pound of methane traps 87 times as much heat as a pound of carbon dioxide in the 20 years after being emitted, and 36 times as much heat as a pound of carbon dioxide over a 100-year time frame.¹⁵ These 20-year and 100-year methane global warming potentials (GWPs) are significantly larger than previous IPCC estimates, with the 20-year GWP reflecting about a 20 percent increase.

Further, the EPA's plan completely ignores the levels of leakage that occur along the natural gas supply chain. A 2012 study found that methane leakage of more than 3.2 percent of total consumption means that burning natural gas instead of coal is worse for the climate in the next 20 years, and that leakage at about 7.6 percent makes it worse on a 100-year horizon.¹⁶ But this breakeven threshold for leakage was calculated using now outdated estimates of methane's effects on the climate. The breakeven threshold looking over 20 years is now closer to 2.8 percent leakage, and, according to the latest science, more than 3 percent is leaking.¹⁷

There is a much better way. The EPA's path includes only a 2 percent growth in renewable energy over what would be done without the plan.¹⁸ We can do better than that. Thanks to aggressive government programs, commercial photovoltaic solar power is now cheaper than fossil fuel electricity in both Italy and Germany.¹⁹ In Massachusetts, utilities are now buying wind-generated electricity for less than the cost of conventional energy.²⁰ Renewable energy is a better solution, without the threat to our drinking water, the water use or the tectonic dangers of fracking. Yet the EPA plan gives it short shrift, suggesting that the agency will not emphasize doing better than our current path.

And we must do better. The EPA's plan is not aggressive

enough. The goals set by the EPA fall far short of the IPCC's goals for developed countries of economy-wide reductions of 15 to 40 percent below 1990 emissions by 2020; they also fall far short of the 80 percent emissions reductions by 2050 that scientists tell us are needed to avoid the worst effects of climate change. Indeed, with these targets, U.S. economy-wide emissions would still be above 1990 levels in 2030.²¹

Switching to natural gas will not cut greenhouse gas emissions for decades, a crucial time frame for stopping global warming. Switching will lock in dangerous climate change, even assuming that strong regulations and enforcement are put in place to address methane leakage. There is consensus in the climate science community that baseline, minimum-conceivable levels of carbon dioxide and methane emissions from extracting, transporting and burning natural gas are unacceptably high.

The EPA plan is in need of drastic rewriting to take into account the current science of the climate change effects of natural gas. We cannot simply trade coal for fracked gas and hope for the best. The plan should push for more aggressive use of truly renewable, sustainable energy to meet the real, economy-wide goals for emissions reductions that are needed to stave off drastic climate change.



Endnotes

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Food & Water Watch works to ensure the food, water and fish we consume is safe, accessible and sustainable. So we can all enjoy and trust in what we eat and drink, we help people take charge of where their food comes from, keep clean, affordable, public tap water flowing freely to our homes, protect the environmental quality of oceans, force government to do its job protecting citizens, and educate about the importance of keeping shared resources under public control.

