

Upcoming EPA and BLM Standards Could Substantially Cut Heat-Trapping Methane Pollution from the Oil and Gas Industry



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The oil and gas sector is the nation's largest industrial source of methane, the main component of natural gas. Nearly 8 million metric tons of this valuable American energy resource are lost annually through leaks in the oil and natural gas system, enough to meet the heating and cooking needs of 6 million homes.

Methane is also a highly potent heat-trapping pollutant: a ton of methane in the atmosphere warms the climate more than 80 times as much as a ton of CO₂ during the first twenty years after release.ⁱ

One recent report predicts that methane emissions will increase five percent in the next five years in the absence of federal emissions standards.ⁱⁱ Fortunately, proven, low-cost technologies are already commercially available to cut methane pollution from leaking and venting equipment at oil and gas facilities.ⁱⁱⁱ

Federal timeline for action

In January 2015, the White House announced a suite of policies to reduce methane pollution from the oil and natural gas sector, as well as a long term goal to reduce methane emissions from the oil and gas industry by 40-45% below 2012 levels by 2025.

According to the announcement, this summer the Environmental Protection Agency (EPA) will propose the first ever direct regulation of methane pollution from the oil and natural gas sector for new and modified sources.

In addition, this spring the Bureau of Land Management (BLM) will propose standards to reduce venting and flaring from oil and gas operations on public lands. This would update decades-old policies that have led to the loss of millions in royalties' revenue.

Why we need action on methane emissions

Stop Unnecessary Energy Waste

Methane lost through leaks and intentional venting and flaring is a huge waste of a valuable product that benefits no one. But methane control technologies can cost-effectively cut this pollution. According to a 2014 report by ICF International, emissions can be cut by 40 percent for just one penny on average per thousand cubic feet (mcf) of gas produced, or about \$0.42 for every ton of CO₂-equivalent reduced on a 20-year time horizon.

Protect Public Health

Methane pollution controls would bring important public health benefits for communities located near energy development, by simultaneously cutting smog-forming and cancer-causing pollutants released from the oil and gas sector.

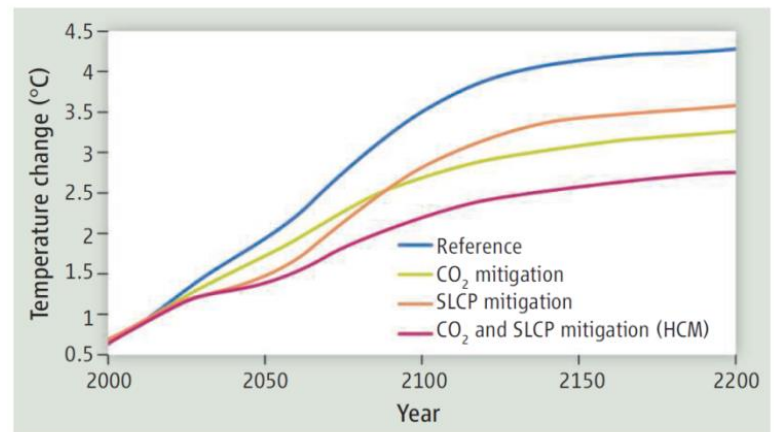
Additionally, since methane has an oversized impact on the warming we will experience in the next few decades. Reducing methane pollution is an essential step toward avoiding the worst impacts of climate change on our communities — including increased heat and drought, stronger storms, and sea level rise that put our communities in harm's way.

Protect Our Climate

Leaving the methane problem unaddressed would undermine the potential for natural gas to serve as a lower-carbon alternative to coal.

Going after achievable reductions would provide a significant climate benefit over the next 20 years, equivalent to eliminating the carbon dioxide pollution from about 90 coal-fired power plants -- about 340 million tons of carbon dioxide per year.^{iv} To avoid catastrophic climate change, we need to reduce both carbon dioxide *and* methane.

The adjacent chart from a study by Shoemaker et al, published in 2013 in *Science*, shows how efforts to reduce CO₂ (the green line) have particularly strong impacts on temperature in the long term, while efforts to reduce methane and black carbon (short-lived climate pollutants, as shown in the orange line) can have a more immediate impact on reducing the pace of warming in the next 20 years. The dark red line shows how the two strategies more effectively work together than apart, to reduce how much and how fast warming increases over the short- and long-term.^v



As more electric utilities shift away from coal-fired power plants and increase the amount of natural gas power generation, it is more important than ever that we reduce climate-damaging methane emissions from oil and natural gas system using proven, low-cost methane controls.

Mitigating methane will grow jobs

Tackling methane emissions creates high-quality jobs in a growing domestic manufacturing and service sector. According to a new report,^{vi} there are dozens of companies with locations in nearly every state already manufacturing, selling, and supporting the proven and cost effective methane control technologies available today to address this problem.

Voluntary approaches have proved inadequate

Some companies have taken voluntary steps to reduce methane pollution, but voluntary methane reduction measures have not and will not provide our nation's communities and families with necessary comprehensive health and environmental protections. With thousands of producers around the country, only consistent national rules can ensure that companies have a level playing field and people have the protections they deserve.

States give us a model for federal action

In Colorado, energy companies, environmental groups and state legislators found common ground that led to the nation's first rules to directly limit methane emissions. By requiring oil and gas operators to inspect equipment and repair leaks, Colorado will reduce more than 100,000 tons of methane and some 90,000 tons of smog-forming VOCs each year—equal to the amount produced by all the cars and trucks in the state.

ⁱ The Intergovernmental Panel on Climate Change (IPCC) 5th assessment report found methane to be at least 84 times more potent than CO₂ over the first two decades after being emitted to the atmosphere. On a 100-year timeframe, methane is at least 28 times more potent. http://www.climatechange2013.org/images/uploads/WGIAR5_WGI-12Doc2b_FinalDraft_All.pdf

ⁱⁱ ICF International, "Economic Analysis of Methane Emission Reduction Opportunities in the U.S. Onshore Oil and Natural Gas Industries," March 2014.

ⁱⁱⁱ Examples of technologies and practices identified in EPA's White Papers include frequent leak detection and repair at well sites, compressor stations, and other facilities; replacing or retrofitting pneumatic devices with low or zero-emitting models; using good maintenance and pollution control practices at compressors; controlling emissions from completions and production at oil wells; and using best available technologies to reduce emissions from liquids unloading at gas wells. EPA Whitepapers available here: <http://www.epa.gov/airquality/oilandgas/whitepapers.html>

^{iv} Looking at the long-term impact over the next century, these annual methane reductions are equivalent to eliminating the carbon dioxide pollution from about 40 power plants, or about 140 million tons of carbon dioxide every year.

^v See J.K. Shoemaker et al., "What Role for Short-Lived Climate Pollutants in Mitigation Policy?" 342 *Science* 1323 (2013).

^{vi} Datu Research, "The Emerging U.S. Methane Mitigation Industry" October 2014