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**IN BRIEF**

# EPA's Proposed Air Rules for Oil and Gas Operations

## Saving Money, Saving Lives, Protecting the Climate

### Why Reduce Methane from Oil and Gas Operations?

- Methane is an especially potent climate pollutant; it packs more than 80 times the warming power of carbon dioxide over a 20-year timeframe[i]. One quarter of the climate disruption we're experiencing today comes from methane pollution[ii].
- The U.S. loses over $1 billion worth of natural gas every year through methane leaks and intentional releases throughout the oil and gas system[iii]. This is enough natural gas to meet the heating and cooking needs of over 5 million American homes[iv].
- Methane is released along with toxic and smog-forming pollutants[v] such as volatile organic compounds, benzene, toluene, ethylbenzene and xylene. The same technologies that reduce methane also limit these other harmful pollutants.
- Currently there are no national limits on methane pollution from oil and gas operations.

### What has the EPA proposed?

- EPA has proposed nationwide standards to address methane and volatile organic compounds from new and modified sources in the oil and gas industry.
- EPA has also proposed guidelines for existing oil and gas sources in ozone nonattainment areas to help restore healthy air in those communities.
- These proposed actions will employ highly cost effective, available technologies that have already been successfully deployed in oil and gas producing states like Colorado and Wyoming. EPA's proposed standards would require sources to:
  - Find and repair leaks,
  - Capture natural gas from hydraulically fractured oil wells,
  - Limit emissions from pneumatic controllers and pumps, and
  - Limit emissions from compressors.

### What are the Costs and Benefits of the Rules?

- In 2025, EPA estimates that that the proposal will have benefits between $460 million and $550 million. EPA expects benefits to outweigh costs by $120 million - $150 million[vi].
- These estimates don't include the health benefits of reductions in other pollutants, including smog-forming compounds and air toxics.
- Low cost solutions are readily available and have already been deployed in key states. A recent study by ICF International[vii] estimated that companies could cut methane emissions by 40 percent or more for about one quarter of one percent of the price of the gas they're selling, or about one penny per thousand cubic feet. That means $3.00 worth of gas would now cost $3.01.
- Many of these technologies capture gas that would otherwise be wasted, ultimately saving producers money.

[i] IPCC AR5 p. 714 https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf
[ii] EDF calculation based on IPCC AR5 WGI Chapter 8.

[iii] Methane emissions from natural gas and petroleum systems were equal to 182.6 mmt CO2e in 2013, according to EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks. http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf. Using a global warming potential (GWP) of 25 (as used by EPA per reporting requirements under the United Nations Framework Convention on Climate Change), this amount is equal to 7.304 mmt of CH4. Using a standard density conversion factor for methane, 7.304 mmt CH4 is equal to about 380 Bcf CH4. At $3/Mcf, this amount is worth between $1.13 billion, assuming 100% methane in natural gas, and $1.42 billion, assuming 80% methane in natural gas.

[iv] US average home use 73.65 Mcf Natural Gas, as calculated by dividing total household natural gas consumption http://www.eia.gov/dnav/ng/ng_sum_lsum_a_EPG0_vrs_mmcf_a.htm by total residential natural gas customers http://www.eia.gov/dnav/ng/ng_cons_num_dcu_nus_a.htm. 380 Bcf methane divided by average home use is 5.2 million homes. Using 95% methane in pipeline quality natural gas, the figure is about 5.4 million homes.

[v] http://www.epa.gov/groundlevelozone/basic.html

[vi] EPA fact sheet p.6 http://www.epa.gov/airquality/oilandgas/pdfs/og_fs_081815.pdf

[vii] Study available at www.edf.org/methanesolutions

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