



More Jobs, Less Methane

Producing, processing, and transporting oil and natural gas currently wastes millions of tons of gas. This waste cuts into oil and natural gas companies' topline revenues, exacerbates climate change and its related costs and heightens investor risk.

Instead of wasting natural gas, we can take the economically sensible path. We can keep the natural gas in the system. We can do this by securing strong federal standards at oil-and-gas industrial sites – new and old – that will cut pollution from methane, the main component of natural gas, 40-45 percent by 2025.

These low-cost federal safeguards improve the oil and gas sector's efficiency. They also send a strong, clear market signal that will create jobs and grow businesses in the methane mitigation industry.

Good jobs:

- The median wage in the methane mitigation sector is nearly \$31 an hour. That's 60 percent higher than the U.S. average.ⁱ
- There is strong demand in the methane mitigation industry for blue-collar jobs like mechanical and electrical engineers, technicians and welders. Other industry positions include: financial analysts and sales managers.ⁱⁱ

Business growth:

- Nearly 80 firms manufacture technologies or provide services to reduce methane pollution in oil and natural gas production. Almost all are headquartered in the U.S.ⁱⁱⁱ
- The majority – nearly 60 percent – qualify as a small business.^{iv}
- Methane mitigation industry firms operate at more than 530 locations in 46 states. Nearly 400 are service and sales locations; more than 100 are manufacturing and assembly sites.^v

Top 10 states for methane mitigation company operations:^{vi}

1. Texas (185 total locations)
2. Oklahoma (47)
3. Colorado (40)

4. Pennsylvania (36)
5. Louisiana (29)
6. California (29)
7. Wyoming (19)
8. Illinois (17)
9. Ohio (16)
10. New Mexico (12)

Improving efficiency:

- The U.S. loses more than \$1 billion worth of natural gas every year through methane leaks and intentional releases throughout the oil and gas system. This is enough natural gas to meet heating and cooking needs in more than 5 million American homes.^{vii}
- The majority of the oil and gas industry's methane leakage comes from older equipment.^{viii} Leaks occur at wellpads, gas processing plants, compressor stations, and large above-ground distribution facilities.^{ix}
- A single faulty pressure release valve can leak nearly \$110,000 worth of gas annually.^x
- Many methane mitigation measures, like infrared cameras and tunable diode lasers, are commercially available and low-cost.^{xi} In fact, many measures pay for themselves within a year or two.^{xii}
- Unfortunately, while their efficacy in reducing pollution has been proven in the field, their adoption is far from universal.^{xiii} For example, a voluntary program for industry to cut methane pollution was initiated, but the fact is there simply aren't enough industry volunteers.

Heightened investor risk:

- Methane pollution reporting by the oil and gas industry is inadequate. This makes it difficult for investors to assess performance and manage risk.^{xiv}
- Due to an increasing focus on climate change from the larger business and investment communities, methane pollution is a long-term reputational risk for the oil and gas industry.^{xv}

Combating rising economic costs of climate change:

- Methane is a highly potent greenhouse gas.^{xvi}
- The oil and gas industry is the nation's largest industrial source of methane.^{xvii}

- Crop losses, flood damage, wildfires and other climate-related disasters cost each and every U.S. taxpayer \$1,100 in 2012 alone.^{xviii}
- To achieve overall greenhouse gas emission reduction targets and maintain U.S. global climate leadership, cutting more methane pollution from industrial oil and gas sites must be part of the solution.

'New-source' standards only go so far:

- The White House set an overall goal of cutting total methane pollution 40-45 percent by 2025 relative to 2012 levels.^{xix}
- The first step in reaching this goal was proposed in August 2015, when the Environmental Protection Agency (EPA) proposed standards that will make newly built oil and gas industrial sites much more efficient.^{xx}
- In 2025, EPA estimates these new-source standards will have climate benefits of up to \$550 million. Even when the costs – less than one percent of the industry's sales revenue^{xxi} – are taken into account, net economic benefits still top \$120 million.^{xxii}
- While these standards are a boon for the economy, they still fall far short of reaching the overall methane pollution reduction goal.
- By requiring industry to, when possible, use non-emitting technologies instead of pneumatic equipment designed to emit natural gas, and by requiring devices and practices that dramatically reduce venting from well bore liquids unloading, these standards can be strengthened.
- EPA also needs to strengthen the proposed rule for leak detection and repair.
- However, the primary reason EPA falls short of the overall target is because the proposed new-source standards are limited only to newly built and modified sites.

'Existing-source standards' help get us the rest of the way:

- In order to close the big gap between what new-source standards will achieve and the larger 40-45 percent overall methane pollution reduction goal, the EPA must set new standards for existing sources (i.e., older, more established industrial sites).
- Ninety percent of methane pollution from the oil and gas industry in 2018 will come from *current* operations.^{xxiii}
- To address this rampant pollution, standards for existing sources must match standards for new sources – then both must go further, requiring use of proven technologies not currently required at any sites, new or old.

Model state policies earn industry support:

- In designing effective methane standards, EPA can build on standards from industry-leading states like Colorado and Wyoming. For example, Colorado has reduced methane pollution by requiring companies to replace “high-bleed” pneumatic devices, which discharge large amounts of methane into the atmosphere, to more efficient “low-bleed” devices.^{xxiv}
- Commonsense measures in states like Colorado and Wyoming have already earned industry support. Anadarko, for example, supported Colorado’s methane regulations by calling them “a very common-sense approach to constructively addressing something that is very important to the people of Colorado... [and the] Colorado rules also make financial sense for the industry. Instead of releasing some of the gases into the air, companies can collect and sell them.”^{xxv}

Environmental Entrepreneurs (E2) is a national, nonpartisan group of business leaders, investors, and professionals from every sector of the economy who advocate for smart policies that are good for the economy and good for the environment. Our members have founded or funded more than 2,500 companies, created more than 600,000 jobs, and manage more than \$100 billion in venture and private equity capital. For more information, see www.e2.org or follow us on Twitter at [@e2org](https://twitter.com/e2org).

ⁱ https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

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^{iv} https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^v https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^{vi} https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^{vii} <http://www.methanefacts.org/files/2015/09/MWG-Methane-Pollution-Standard-Backgrounder.pdf>

^{viii} https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^{ix} http://docs.nrdc.org/energy/files/ene_14111901a.pdf

^x https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^{xi} https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf

^{xii} http://docs.nrdc.org/energy/files/ene_14111901a.pdf

^{xiii} http://docs.nrdc.org/energy/files/ene_14111901a.pdf

^{xiv} <https://www.edf.org/report-methane-rising-risk-both-oil-gas-sector-and-investors>

^{xv} <https://www.edf.org/report-methane-rising-risk-both-oil-gas-sector-and-investors>

^{xvi} <http://www.ipcc.ch/report/ar5/wg1/>

^{xvii} http://www3.epa.gov/airquality/oilandgas/pdfs/og_fs_081815.pdf

^{xviii} <http://www.nrdc.org/globalwarming/files/taxpayer-climate-costs-IP.pdf>

^{xix} http://www3.epa.gov/airquality/oilandgas/pdfs/og_fs_081815.pdf

^{xx} <http://www.catf.us/resources/publications/view/219>

^{xxi} http://docs.nrdc.org/energy/files/ene_14111901a.pdf

^{xxii} http://www3.epa.gov/airquality/oilandgas/pdfs/og_fs_081815.pdf

^{xxiii} https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf

^{xxiv} http://docs.nrdc.org/energy/files/ene_14111901a.pdf

^{xxv} <http://insideclimateneews.org/news/20140320/colorados-tough-new-drilling-rules-make-impact-texas>