

Issue: PA - Environment and Economy

It's a Win: Good Jobs and Cleaner Air

Introduction

Wendell Berry, a lifelong environmentalist, made the simple statement, “Earth is what we all have in common.”

More and more, Pennsylvanians are unifying around their concern for the environment: the air that they breathe, the water they drink.¹ All across the state, from rural areas to cities, from all political parties, people say they prefer meaningful air pollution controls and candidates who take “strong action on the climate crisis,” per a 2019 Global Strategy Group survey.²

With that in mind, Pennsylvania can affordably improve air quality and reduce climate change—all while creating many good jobs. Over the last decade, it has become increasingly clear to scientists that the oil and gas industry is leaking vast amounts of methane, an incredibly potent greenhouse gas, from every point in production. Over a million tons of methane per year is leaking in Pennsylvania alone.^{3,4}

Everyone wins – Environmentalists, Industry and Job Seekers

There is often a tension between those who choose environmental action and those who want economic development. In tackling the problem of methane emissions, all parties stand to gain.

For the oil and gas companies, methane is a product they sell. Capturing the leaking gas and selling it will offset the majority of the costs involved in finding and repairing methane leaks, but more importantly, it will repair the reputation of the oil and gas industry.⁵ No one loves a polluter. If the natural gas industry wants to play a part in the clean energy economy, it will need to solve this problem. This is why many of the industry leaders are setting their own goals for emissions reductions.⁶

Solving this problem is not simple. Some of the best environmental scientists around the country are trying to develop more effective ways to find and fix the leaks. They know that while methane is not as long-lasting as carbon dioxide, it is more potent in the short-term and traps more than 80 times as much heat as carbon dioxide does in the atmosphere over a 20 year period.⁷ Scientists know that the cost of global climate-related damages to society and the planet—representing real risk to world-wide economies—is in the tens of billions of dollars per year.⁸ Scientists consider reducing emissions the “low hanging fruit” in making timely progress towards mitigating climate change.

An entire industry has been established and continues to grow to do methane detective work and to repair or fix leaks as needed. The economy will benefit as more jobs are created in capturing and fixing leaking gas. To find and measure these leaks requires equipment ranging from simple handheld detectors to lasers, drones and satellites. Entrepreneurs compete to create the best, the most autonomous, and the least expensive solutions.⁹ Environmental attorneys are hired to merge science with the rulemaking process and to establish public-private partnerships to introduce new products.¹⁰ Then there are jobs created to use these gas detectors and to do the repair work described below.

Jobs created in leak detection and repair (LDAR)

Jobs in the LDAR industry pay well and provide good benefits, with annual pay ranging from \$31,000 for high school graduates hired as technicians to well over \$100,000 for more experienced field or technical positions.^{11,12,13}

Nick James, an Operations Director at Dexter Field Services, explains, “LDAR provides young people who lack a college degree the opportunity to acquire a broad, transferable set of skills and earn good entry-level wages.”¹⁴ In conversation and in job descriptions, Dexter Field Services says it provides “upward mobility supported by extensive internal training,” and that “LDAR technicians and project managers acquire specific skill sets that are transferable not just within the oil and gas industry, but beyond.”

A regulatory framework is needed for job creation and emissions reduction

Uniform progress towards solving the problem of methane leaks depends heavily on the federal and state regulatory environment. Laws are needed to incentivize and guide oil and gas companies.^{15,16}

The scientific understanding of this topic is evolving rapidly, so it is important that government policy, agency rules, and legislation keep current.

Rules only work if there is compliance, however, and regulatory agencies need enough resources—both staff and technology—to ensure that companies are taking responsibility for their environmental footprint.

It is only with these three pieces in place— (a) a strong legal framework, (b) flexibility in laws and rules to accommodate innovation and change, and (c) regulators with the resources and authority necessary to enforce emissions goals—that the economy will reap the full benefit of capturing leaking methane.

Regulations and means of enforcement in the U.S. and Pennsylvania

U.S. Regulations

The Obama administration put the first federal methane emissions controls into effect in 2016 focusing mostly on new oil and gas infrastructure. These rules were intended to be a first step, followed by rules addressing older equipment.¹⁷ The Trump administration delayed and has now in August 2020 repealed these rules rather than build on them.^{18,19} A number of states and large energy companies are opposing this rollback.²⁰

Pennsylvania Regulations

Governor Wolf announced his intention to reduce oil and gas emissions and began by issuing a 2018 Executive Order to change the Pennsylvania Department of Environmental Protection (DEP) permit requirements for new equipment—new gas wells, compressors, etc.²¹ This brought the DEP’s rules up-to-date with the recently repealed Obama administration federal rules,²² and included emissions limits and LDAR requirements, but lack of compliance and enforcement of these rules has complicated meaningful emissions reductions.²³

In 2019, Governor Wolf issued another Executive Order proposing the Regional Greenhouse Gas Initiative (RGGI), a carbon dioxide cap-and-trade program. This program calls for a statewide “80 percent reduction of net greenhouse gas emissions by 2050 from 2005 levels.”²⁴ While RGGI targets carbon dioxide and does not target methane leaked from the oil and gas industry, requiring industry to reduce carbon emissions would result in significantly cleaner air, would slow climate change over time and would also create new jobs.^{25,26}

Currently, Governor Wolf is proposing new DEP rules to address smog-forming volatile organic compounds (VOCs), which will have the effect of also regulating methane leaking from older oil and gas infrastructure. The rules require the use of LDAR on higher production operators, but the proposed rules have significant exclusions, including low production infrastructure, which can also be dangerously leaky.^{27, 28}

Pennsylvania Department of Environmental Protection (DEP) needs more resources

The DEP is responsible for ensuring that oil and gas companies follow methane rules, but its budget needs strengthening to accomplish the state’s goals.²⁹ Democratic Representative Greg Vitali reported that the DEP’s staffing has dropped by almost 30% since 2002, even while the energy industry has experienced explosive growth.³⁰ The effect of these shortcomings is that the DEP relies on industry self-reporting for emissions data. This is not an ideal arrangement. Fewer than half of the state’s operating wells submitted reports to the DEP and only half of those included emissions information, much of which contained inaccuracies and inconsistencies.³¹ In May 2020, the Environmental Defense Fund discovered emissions were 16 times the amount self-reported by industry.³²

Partisanship harms our environment and our economy

Governor Wolf has had some significant policy successes by using Executive Orders. Even so, Pennsylvania’s regulatory environment is fundamentally flawed if citizens expect the million tons of annual state-wide methane emissions to subside.

The Republican members of the State Senate and House have referred all environmental-related legislation to committees where the bills sit, unvoted on.

Stakeholders supporting emissions controls include:

- Many of the oil and gas companies that would be held to account, including BP, Exxon and Shell³³
- A strong majority of voters in Pennsylvania
- Environmental scientists from the Kleinman Center for Energy Policy at the University of Pennsylvania^{34,35}
- Engineering professors from the Carnegie Mellon Scott Institute for Energy Innovation³⁶
- Other universities including Stanford, Colorado School of Mines, University of Texas, Austin
- The International Energy Association, made up of 30 member countries³⁷
- The United Nations³⁸
- Democratic Governor Wolf
- Democratic State Senators and House members

Former Republican Pennsylvania Governor Tom Ridge wrote an opinion piece in *The Atlantic* on Earth Day this year to question when and why the Republican Party “largely abandoned

environmental issues,” and how “more and more, the GOP as a whole seems out of touch on this crucial issue.”³⁹

Why do Republican State Senators and House members stand in the way of this urgently important initiative that will crack down on polluters and bring cleaner air to Pennsylvania?

Conclusion

It is time. Voters need to vote for Democratic legislators who will work to ensure their state government protects their health, their air quality, and the health of the planet they live on.

¹ <https://stateimpact.npr.org/pennsylvania/2019/04/01/poll-shows-pennsylvanians-concerns-about-climate-change-are-increasing/>

² <http://paenvironmentdaily.blogspot.com/2019/05/new-poll-finds-79-of-pennsylvania.html>

Poll conducted by Global Strategy Group in March 2019, commissioned by EDF Action

³ <http://blogs.edf.org/energyexchange/2019/10/22/pennsylvania-has-an-opportunity-to-lead-on-methane-as-epa-falters/>

⁴ <https://www.edf.org/media/edf-analysis-finds-pennsylvania-oil-and-gas-methane-emissions-are-double-previous-estimate>

⁵ https://policyintegrity.org/files/publications/Capturing_Value_-_Methane_Policy_Brief.pdf (p6)

⁶ <https://e360.yale.edu/features/methane-detectives-can-a-wave-of-new-technology-slash-natural-gas-leaks>

⁷ <https://kleinmanenergy.upenn.edu/sites/default/files/policydigest/Plugging-the-Leaks.pdf>

⁸ <https://kleinmanenergy.upenn.edu/policy-digests/plugging-leaks#:~:text=At%20current%20estimates%20of%20the,%24100%20billion%20in%20global%20damages.>

⁹ <https://e360.yale.edu/features/methane-detectives-can-a-wave-of-new-technology-slash-natural-gas-leaks>

¹⁰ <https://hls.harvard.edu/content/uploads/2008/07/full-working-draft.pdf>

¹¹ <https://www.ziprecruiter.com/Jobs/Oil-and-Gas-Field-Technician/--in-pennsylvania>

¹² <https://www.edf.org/sites/default/files/find-and-fix-datu-research.pdf>

¹³ <https://www.edf.org/how-reducing-methane-emissions-creates-jobs>

¹⁴ <https://www.edf.org/sites/default/files/find-and-fix-datu-research.pdf> (p23)

¹⁵ <https://www.wri.org/blog/2019/09/us-government-retreats-reducing-climate-warming-methane-4-states-step-up>

¹⁶ <https://insideclimatenews.org/news/29082019/methane-regulation-oil-gas-storage-pipelines-epa-rollback-trump-wheeler>

¹⁷ <https://www.washingtonpost.com/news/energy-environment/wp/2016/05/12/obama-administration-announces-historic-new-regulations-for-methane-emissions-from-oil-and-gas/>

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- ¹⁸ <https://www.brookings.edu/interactives/tracking-deregulation-in-the-trump-era/>
- ¹⁹ <https://www.nytimes.com/2020/08/13/climate/trump-methane.html>
- ²⁰ <https://www.post-gazette.com/business/powersource/2019/12/02/Pennsylvania-DEP-Exxon-Shell-Equitrans-agree-Trump-shouldn-t-roll-back-methane-rules-fracking-pipeline/stories/201912020098>
- ²¹ <https://stateimpact.npr.org/pennsylvania/2018/09/20/dep-moving-forward-with-emission-rules-for-existing-oil-and-gas-sources/>
DEP general permits GP-5 and GP-5A
- ²² <https://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Methane/GP-5%20GP-5A%20and%20Ex%2038%20Overview%20Jun%202018.pdf>
- ²³ <https://stateimpact.npr.org/pennsylvania/2017/11/30/pa-wants-to-cut-methane-emissions-but-plans-moving-slowly/>
- ²⁴ <https://www.governor.pa.gov/newsroom/executive-order-2019-01-commonwealth-leadership-in-addressing-climate-change-and-promoting-energy-conservation-and-sustainable-governance/>
- ²⁵ <https://www.rff.org/publications/issue-briefs/options-issuing-emissions-allowances-pennsylvania-carbon-pricing-policy/>
- ²⁶ <https://kealliance.org/regional-greenhouse-gas-initiative/>
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- ²⁸ <https://www.fractracker.org/2020/06/testimony-to-pa-dep-on-control-of-methane-and-voc-emissions-from-oil-and-natural-gas-sources/>
- ²⁹ <https://grist.org/energy/pennsylvania-regulators-promised-to-keep-an-eye-on-polluters-during-the-pandemic-theyre-struggling/>
- ³⁰ <https://www.pennlive.com/opinion/2020/01/gov-wolfs-2020-21-budget-should-address-environmental-protection-opinion.html>
- ³¹ <https://www.ehn.org/fracking-methane-leaks-2645817287.html>
- ³² <https://www.post-gazette.com/news/environment/2020/06/23/Pennsylvania-methane-emissions-proposed-regulations-reduction-strategy-DEP/stories/202006230139>
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- ³⁴ <https://kleinmanenergy.upenn.edu/about>
- ³⁵ <https://rtoinsider.com/kleinman-center-for-energy-policy-methane-emissions-101978/>
- ³⁶ https://www.cmu.edu/energy/documents/Shale_Workshop_Deliberations_and_Recommendations_Final.pdf (p57)
- ³⁷ <https://www.iea.org/reports/methane-tracker-2020/methane-policy-and-regulation-database>
- ³⁸ <https://www.un.org/en/sections/general/un-and-sustainability/>
- ³⁹ <https://paenvironmentdaily.blogspot.com/2020/04/op-ed-my-fellow-conservatives-are-out.html>