

# REPORTERS' GUIDE TO FRACKED GAS AND PETROCHEMICALS

*Covering the oil, gas, and petrochemical industry: How your coverage can better reflect the realities of impacted communities*



*Version 1, October 17, 2024*

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By the Center for Coalfield Justice

## **ABOUT CCJ**

The Center for Coalfield Justice (CCJ) is a nonprofit whose mission is to improve policy and regulations for the oversight of fossil fuel extraction and use; to educate, empower, and organize coalfield residents; and to protect public and environmental health.

## **AVAILABLE ONLINE AT**

<https://centerforcoalfieldjustice.org/resources/reporters-guide-to-fracked-gas-and-petrochemicals/>

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## INTRODUCTION

Communities near fracking activities face [daily harm to their health and environment](#), and [more than 9 in 10 Pennsylvanians support stricter health and safety regulations on extractive industry](#). Yet, some news coverage reinforces the narrative that we must choose between our environment and our jobs. [But that simply isn't the reality](#).

Instead, we encourage asking questions that spark conversations about the real tradeoffs and risks that come from fracking and to center the folks that are actually living with it.

Fracking is often [overstated](#) as an important part of our economy. Independent economic analyses show that the promise of job creation was greatly exaggerated, with many fracking-related jobs going to out-of-state workers. In March of 2024, the state reported 16,831 direct jobs in the industry, [less than one half of 1% of all jobs](#).

We believe it's important that news coverage conveys an authentic portrayal of the realities of communities that live with the complex issue of fracked gas and petrochemicals.

For years, fossil fuel companies have been looking for new markets for their products so that they can continue raking in record profits. [Petrochemicals](#), the chemicals that are separated out from fossil fuels in places like Shell's ethane cracker plant in Beaver County, PA, are a major driver of oil and gas production, rather than, as energy companies like to claim, for "energy freedom." Petrochemicals rely on fossil fuels and mean more fracking, more pollution, more record-breaking profits for corporations, and putting the planet and climate more at risk.

The most common end uses of petrochemicals include [agrochemicals](#) and [plastic](#), which is [made from fracked gas](#) and is the biggest category of items made from petrochemicals. Nearly half of the plastic that's produced is used one time and thrown away.

### **ISSUES ADDRESSED IN THIS GUIDE:**

- [Cancer and Health Risk](#)
- [False Solutions - hydrogen, CCS, and pyrolysis](#)
- [Hazardous Waste](#)
- [Mental health impacts](#)
- [Workers + false promises of jobs](#)
- [Impacts to water](#)
- [Impacts to air](#)
- [Impacts to soil + agriculture](#)
- [Impacts to climate](#)
- [Economic impact](#)
- [NDAs](#)

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## CANCER AND HEALTH RISK

***Ask this:** Studies show that fracking and petrochemical development are linked to various forms of cancer. How can this harm be mitigated? Who is responsible for the impact of this type of infrastructure?*

### **Why this question?**

- See “Public health problems associated with fracking include prenatal harm, respiratory impacts, cancer, heart disease, mental health problems, and premature death,” on pages 61-64 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
- [The Pennsylvania Department of Health and the University of Pittsburgh](#) found that children who lived within a mile of one or more fracking wells in Southwestern Pennsylvania had a five-to-seven-fold risk of lymphoma.
- [Clark et al. \(2022\)](#) identified an increased odds of developing acute lymphoblastic leukemia in children with at least one UOGD (unconventional oil and gas development) well within 2 km of their birth residence during the periods of time of 3 months preconception to 1 year prior to diagnosis and 3 months preconception to birth.

***Ask this:** Fracking and petrochemical infrastructure is often situated next to schools, parks, daycares, and communities with young children. How would you ensure that children are safe from health impacts?*

### **Why this question?**

- [The 43rd Pennsylvania statewide grand jury](#) report recommended expanding setbacks from well pads in Pennsylvania from the required 500 feet to 2,500 feet.
- [Unconventional natural gas development and pediatric asthma hospitalizations in Pennsylvania](#) found that community-level UOGD activity was associated with increased odds of pediatric asthma hospitalizations.
- [Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations](#) found that residential UOGD activity was associated with an increased risk of mild, moderate, and severe asthma exacerbations.
- [Fractured: The body burden of living near fracking](#) is a four-part series about the fracking chemicals in the air, water, and people of western Pennsylvania.
- The results of [Emissions of Particulate Matter Due to Marcellus Shale Gas Development in Pennsylvania: Mapping the Implications](#) support the idea that Pennsylvania’s 500-foot setback distance is not adequate. Instead, policies should consider the number of wells per well pad and local conditions in addition to pushing wells back from residential areas.

- [Evaluation of Gas Well Setback Policy in the Marcellus Shale Region of Pennsylvania in Relation to Emissions of Fine Particulate Matter](#) found that a typical well pad comprised of six wells with high emissions could require a minimum setback of up to 2,400 feet to avoid exposing residents to unlawful levels of particulate matter.
  - [When the Kids Started Getting Sick](#) investigates cases of the rare cancer Ewing sarcoma in children around Washington County, Pennsylvania.
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## FALSE SOLUTIONS - HYDROGEN, CCS, AND PYROLYSIS

***Ask this:** The fracked gas and petrochemical industries have touted “solutions” like blue hydrogen and chemical recycling as critical parts of America’s future. These “solutions” are costly while also failing to provide proof of concept. Do you support investing billions of taxpayer dollars into yet-unproven technologies with a high likelihood of failure and increased environmental burdens?*

### Why this question?

- Fracked gas is used in false solutions like [hydrogen](#) (blue hydrogen is made from fracked gas), the next boondoggle roaring down the pike for Appalachians to deal with. False climate solutions are market-based or technological schemes that only serve to “kick the can down the road”: they delay effective policies that could challenge the power of fossil fuel companies and actually help to mitigate climate change. They also allow polluters to continue polluting without making real emissions cuts, and stand to lock us into a gas-based economy that has failed to produce job growth and local economic prosperity.
  - [Ohio River Valley Institute: Hydrogen & Carbon Capture](#), a compilation of resources
  - [Recycling Lies: “Chemical Recycling” of Plastic Is Just Greenwashing Incineration](#)
  - [Plastic & Climate: The Hidden Costs of a Plastic Planet](#)
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## HAZARDOUS WASTE

***Ask this:** Hazardous waste regulations exempt oil, gas, and petrochemical facilities, leading to the disposal of materials such as drill cuttings in municipal landfills. Do you support closing the hazardous waste loophole?*

or

*Hazardous waste is a dangerous byproduct of oil and gas extraction - what policies would you enact to protect communities where this activity is prevalent?*

### Why this question?

- [Close the Loophole in State Laws Governing the Disposal of Toxic Drilling Waste](#)
  - [NRDC's Report: There is Radioactive Waste in our Water, Air, and Communities](#)
  - [Radiation and fracking](#)
  - [Radioactive fracking resource](#)
  - [Awash in Toxic Wastewater From Fracking for Natural Gas, Pennsylvania Faces a Disposal Reckoning](#)
  - [A New Book Takes on the Dangers of Radioactivity in the Oil and Gas Industry](#)
  - See “Fracking waste disposal is a problem without a solution,” which includes information on drill cuttings, flowback fluid, and produced water (pages 68-71), and “Drilling and fracking activities release radioactivity” (p. 76) in the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
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## **MENTAL HEALTH IMPACTS**

***Ask this:** There are no mental health assessments for children, adults, or workers living and working within the fracking and petrochemical industry. Would you support funding for studies to examine the mental health impact of this industry? What would you say to a constituent facing mental health impacts?*

### Why this question?

- [Particulate Matter and Mental Health – CHEJ](#)  
This study found that higher PM2.5 exposure was strongly associated with higher risk of depression and anxiety
- [The Association of Unconventional Natural Gas Development with Diagnosis and Treatment of Internalizing Disorders Among Adolescents in Pennsylvania using Electronic Health Records](#)  
Identified increased odds of new onset internalizing disorders in females in areas with higher UOGD activity during years with highest UOGD activity (2010-2016).
- [Exposure Assessment of Adults Living Near Unconventional Oil and Natural Gas Development and Reported Health Symptoms in Southwest Pennsylvania, USA](#)  
Reviewed a survey containing self-reported symptoms and found itching or burning eyes, stress, dry skin, difficulty sleeping, and lightheadedness/dizziness to be statistically significantly associated to the cumulative wellsite density within 5 km of respondents' homes.
- [Health Conditions in Retired Manual Labor Miners and Oil and Gas Extraction Workers: National Health Interview Survey, 2007–2017](#)  
Found that retired oil and gas workers experienced a significantly higher prevalence of both hearing loss and self-reported poor health status than all other retirees.
- Jason Smith, a retired and disabled military officer residing in Cecil, underscored the detrimental effects the proposed drilling could inflict on his property and health. “If approved within 1,000

feet of a protected structure, my life's work (our home) would be seriously affected in a negative way," Smith expressed. Highlighting his lung issues and PTSD, he emphasized, "None of this seems fair to me. I gave up a lot to defend our way of life just to have my own countrymen try to ruin my home for greed." From [Cecil Township to Hold Public Hearing on Oil and Gas Ordinance Amendments Tonight](#)

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## WORKERS • FALSE PROMISES OF JOBS

***Ask this:** Industry uses the promise of jobs to secure approvals for projects and federal and state subsidies, then cut permanent jobs to maximize profits as soon as possible when operational. Data show that the region's largest gas-producing counties have actually lost jobs since the beginning of the fracking boom. How would you hold them accountable to those promises of economic prosperity?*

### Why this question?

- [Fracking in Pennsylvania hasn't gone as well as some may think](#). In March of 2024, the state reported 16,831 direct jobs in the industry, less than one half of 1% of all jobs.
- [Oil & Gas: Central to Pennsylvania politics but not its economy](#) According to these figures, the fracked gas industry employs just 1.4% of Pennsylvanians.
- [Has the Shell cracker plant fallen short on its economic promise? Residents and researchers say it's a bust](#)
- [Frackalachia Update: Peak Natural Gas and the Economic Implications for Appalachia](#)  
For the 22 most-fracked counties in Appalachia, job growth declined from 1.6% to -2.1% from 2008 to 2022 for an overall net loss of over 10,000 jobs; income growth fell even further behind both their respective states and the nation; and populations fell considerably, even as statewide rates were stagnant or slightly increased.
- See "Health and safety risks for workers are severe and employment promises unrealized," pages 65-67; "Occupational health and safety hazards," pages 234-262; and "Inaccurate jobs claims, increased crime rates, threats to property values and mortgages, and local government burden," pages 565-598 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
- [2024 U.S. Energy & Employment Jobs Report \(USEER\)](#)
- [Clean Energy Jobs Are Booming, Making Up For Rising Fossil Fuel Unemployment](#)

***Ask this:** Industry has reported that they are experiencing a worker shortage. The people working these jobs are experiencing higher rates of depression, risk of suicide, high fatality rates, and health concerns. How do you propose that we encourage this workforce to grow if these are the repercussions? What kinds of labor policies would you enact to support workers and their families?*

### **Why this question?**

- [What Can Oil and Gas Companies Do to Attract Workers?](#)
  - [North American oil companies scramble to find workers despite boom](#)
  - [Particulate Matter and Mental Health](#)
  - [Suicide Rates by Industry and Occupation](#)
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## **IMPACTS TO WATER**

***Ask this:** Fracking and cracking are water-intensive processes. How do we ensure that our right to clean water is not infringed upon by the massive use of fresh water by the industry?*

### **Why this question?**

- [A horizontal gas well can require 2 to 4 million gallons of water to drill and fracture.](#)
- Radium in our water from fracking: [Radioactivity from oil and gas produced water accumulated in freshwater mussels](#)
- [Drinking Water, Fracking, and Infant Health](#) found consistent and robust evidence that drilling shale gas wells negatively impacts both drinking water quality and infant health.
- [EPA's Study of Hydraulic Fracturing and Its Potential Impact on Drinking Water Resources](#) found scientific evidence that hydraulic fracturing activities can impact drinking water resources under some circumstances.
- [There is Something Wrong Under New Freeport](#)
- See “Fracking contaminates and depletes drinking water sources,” pages 56-59, and “water contamination,” pages 139-207, of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)

***Ask this:** Many people are trying to realize the American dream of owning a home or property, just to have it taken away when industry irrevocably impacts their private water. Regulations help to keep costs from falling onto everyday people, but there are major policy gaps. How would you address issues when people lose their water and there is no obvious solution?*

### **Why this question?**

- [There Is Something Wrong Under New Freeport](#)
- [Hollowed Out](#) (Knob Fork, WV)
- [Pa. Fracking Company Takes Blame for Contaminating Residents' Drinking Water](#)
- [Drilling under Pennsylvania's 'Gasland' town has been banned since 2010. It's coming back.](#)
- [America Is Using Up Its Groundwater Like There's No Tomorrow](#)



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## IMPACTS TO AIR

***Ask this:** Fracking, petrochemicals, and associated infrastructure have significant negative impacts on air quality and, therefore, on human health. What measures would you support to address this problem?*

### Why this question?

- See “Fracking creates air pollution at levels known to harm health,” (pages 59-61) and “air pollution,” pages 105-138 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
- [Air Pollution and Health Impacts of Oil & Gas Production in the United States](#)  
This article highlights the substantial air quality and health impacts of oil and gas production in the US in 2016, including significant contributions to asthma exacerbations, childhood asthma cases, and premature deaths, totaling \$77 billion in health impacts.
- [Air Quality Impacts of Shale Gas Development in Pennsylvania](#)  
Utilizing a high frequency, high resolution satellite-based measure of PM pollution between 2000 and 2018, we identify causal increases in PM2.5 concentration ranging from 0.017 µg/m<sup>3</sup> to 0.062 µg/m<sup>3</sup> in the vicinity of over 20,000 wells, resulting in approximately 20 additional deaths between 2010 and 2017.
- [Particulate Matter and Mental Health](#)
- [Air Pollution from Oil and Gas Production Contributes to Thousands of Early Deaths, Childhood Asthma Cases Nationwide](#)

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## IMPACTS TO SOIL/AGRICULTURE

***Ask this:** Our region relies on agriculture and industry operates heavily on rural land, often resulting in loss of clean water and damage to land. When industry causes these issues and cannot rectify them, where should these landowners go from there? How would you support these vital agricultural workers?*

### Why this question?

- [Fracking and Farmland](#)
- [Fracking with our food: how gas drilling affects farming](#)
- See “Threats to agriculture, soil quality, and forests,” pages 393-413 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)

## IMPACTS TO CLIMATE

***Ask this:** US taxpayers are footing the roughly \$62 billion bill for combating and mitigating climate impacts. The oil and gas industry has spent more than \$100 million each year since 2006 in their efforts to influence federal policymakers, which results in a conservative estimate of \$20 billion in direct federal subsidies to the industry each year. Do you support ending subsidies for oil, gas, and petrochemicals?*

### Why this question?

- [Holding Big Oil Accountable for Climate Costs](#)
  - [Fact Sheet | Fossil Fuel Subsidies: A Closer Look at Tax Breaks and Societal Costs \(2019\)](#)
  - [Oil & Gas Subsidies: Myth vs. Fact](#)
  - [The Zombies of the U.S. Tax Code: Why Fossil Fuels Subsidies Seem Impossible to Kill](#)
  - [EQT says fracked gas is a climate solution, but scientists call that deceptive greenwashing](#)
  - See “Fracking is accelerating the climate crisis,” pages 53-56 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
  - [Methane emissions from major U.S. oil and gas operations higher than government predictions | Stanford Report.](#)
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## ECONOMIC IMPACT

***Ask this:** We’ve been told for decades that the economic impacts of this industry speak for themselves, but drilling creates fewer jobs each year, and in the counties with the most fracking, GDP is down. In addition, people are experiencing increased utility costs, decreased home values, and increased healthcare costs from exposure to pollution. How do you propose our local families recoup the externalized costs of living near this industry?*

### Why this question?

- [Oil and gas health impacts cost \\$77 billion per year, study finds](#)
- Industry is shifting towards plastics and other petrochemicals, hydrogen, LNG (liquified natural gas) exports
- [Pennsylvania’s fracking boom is hurting its oldest residents](#)
- [Why Energy Bills Will Be Even Higher This Winter](#)
- [Shale Gas Development and Property Values: Differences across Drinking Water Sources](#)
- Jason Smith, a retired and disabled military officer residing in Cecil, underscored the detrimental effects the proposed drilling could inflict on his property and health. “If approved within 1,000 feet of a protected structure, my life’s work (our home) would be seriously affected in a negative

way,” Smith expressed. Highlighting his lung issues and PTSD, he emphasized, “None of this seems fair to me. I gave up a lot to defend our way of life just to have my own countrymen try to ruin my home for greed.” From [Cecil Township to Hold Public Hearing on Oil and Gas Ordinance Amendments Tonight](#)

- [Air Pollution from Oil and Gas Production Contributes to Thousands of Early Deaths, Childhood Asthma Cases Nationwide](#), totaling \$77 billion in annual health costs.
- See “Health and safety risks for workers are severe and employment promises unrealized,” pages 65-67; “Occupational health and safety hazards,” pages 234-262; and “Inaccurate jobs claims, increased crime rates, threats to property values and mortgages, and local government burden,” pages 565-598 of the [9th Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure](#)
- [Winter Is Coming: Plastic Has To Go: A Case for Decreasing Plastic Production to Reduce the European Union’s Dependence on Fossil Fuels and Russia](#)

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## NDAS

***Ask this:** Many residents and workers who experience harm from fossil fuel production attempt to hold companies accountable for harm or damages, but in order to receive some form of recompense are forced to sign an agreement that bars them from talking about their experiences. Do you believe we can have fair, transparent, honest conversations about industry when critical voices are silent?*

### **Why this question?**

- [EQT Production vs. Boro of Jefferson Hills](#)

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QUESTIONS OR COMMENTS? Contact the [Center for Coalfield Justice](#) at [info@centerforcoalfieldjustice.org](mailto:info@centerforcoalfieldjustice.org) or 724.229.3550.