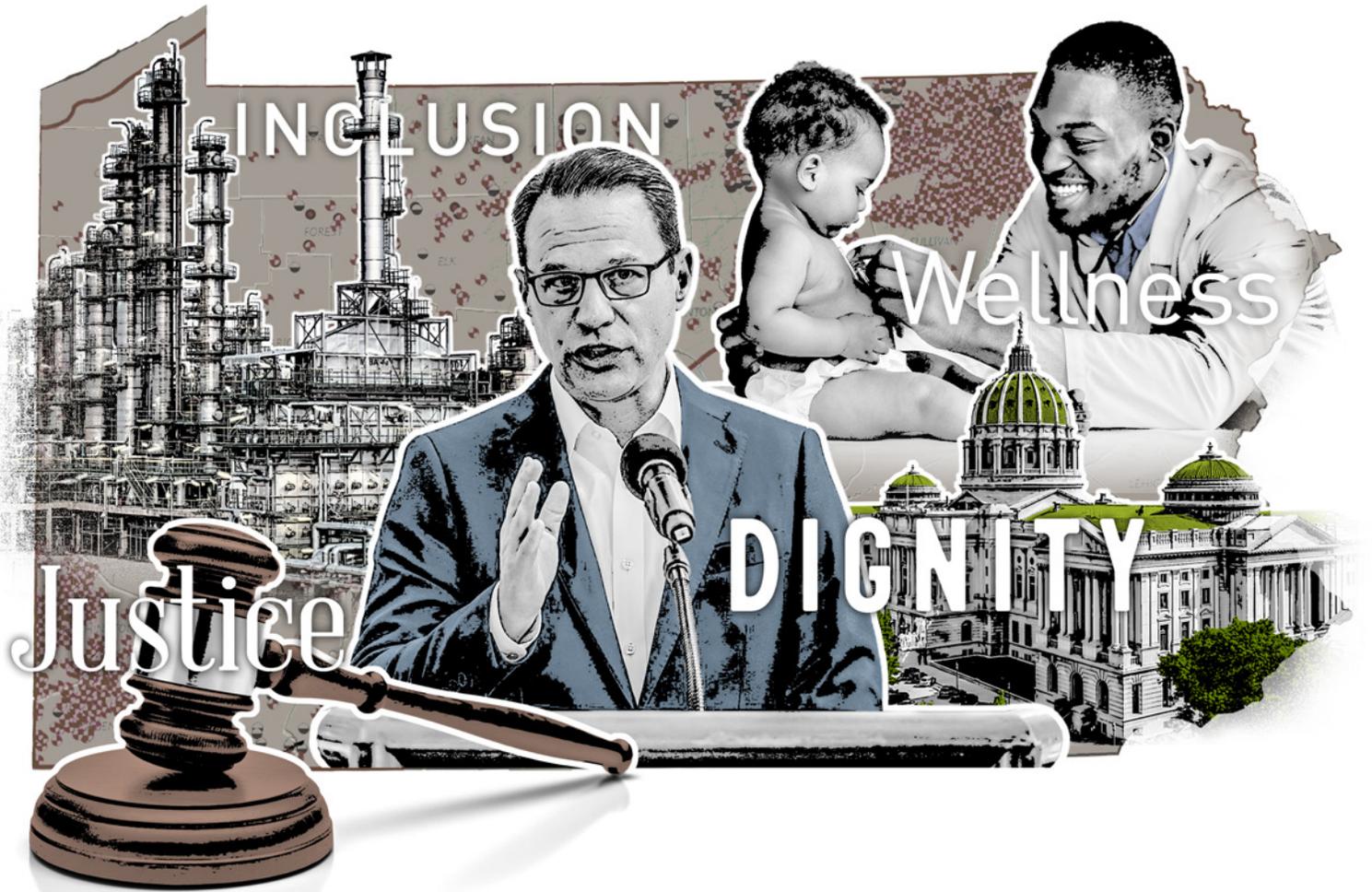


PENNSYLVANIA'S SHALE GAS BOOM:

What the Shapiro Administration Can Do to Better Protect Public Health

EXECUTIVE SUMMARY



ENVIRONMENTAL
HEALTH PROJECT
DEFENDING PUBLIC HEALTH SINCE 2012

APRIL 2025

CREDITS & ACKNOWLEDGEMENTS

This white paper is the culmination of many hours of collaborative effort.

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Sources are cited in the main body of the white paper. For access to an electronic copy of the full paper, scan this QR code or visit:

<https://www.environmentalhealthproject.org/white-paper>

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EXECUTIVE SUMMARY

There remains a profound gap between our Constitutional mandate for clean air and pure water, and the realities facing Pennsylvanians who live in the shadow of fracking giants and their investors.

– Pennsylvania Attorney General Josh Shapiro, June 2020

PURPOSE OF THIS PAPER

Since 2005, shale gas development has increased dramatically across a vast swath of Pennsylvania, and frontline communities have experienced otherwise unexplainable and sometimes devastating health impacts. Residents have reached out to government officials and agencies for explanations as to what is happening, but their inquiries have often been met with denigration, misinformation, or silence.

The Environmental Health Project (EHP) has closely examined the actions of Pennsylvania’s governing bodies over more than a decade of shale gas development (also called *hydraulic fracturing* or *fracking*). We have identified a series of egregious and, at times, intentional efforts to make it easier to extract gas without regard to the health of those living nearby. These failings are discussed in detail in our 2022 white paper, *Pennsylvania’s Shale Gas Boom: How Policy Decisions Failed to Protect Public Health and What We Can Do to Correct It*.

Now, we turn our attention to Gov. Shapiro, who talked passionately about the importance of protecting public health from shale gas development when he was attorney general. He pointed to industry and regulatory failures and vowed to address recommendations made in a Grand Jury Report released in 2020. When he campaigned for governor, he promised stronger health protections for Pennsylvanians, given their constitutional guarantees to clean air and pure water. More than two years into his term, residents are still waiting for meaningful action.

GOVERNMENT AND RESEARCH TIMELINE

GOVERNMENT

JUNE 2020



Pennsylvania’s 43rd Statewide Investigating Grand Jury report on the unconventional oil and gas industry released under Attorney General Shapiro

RESEARCH

JUNE 2020



Maternal & Child Health: Tran et al. Residential Proximity to Oil and Gas Development and Birth Outcomes in California: A Retrospective Cohort Study of 2006-2015 Births

JULY 2020



Maternal & Child Health: Cushing et al. Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas

JULY 2020



Mortality: Hendryx & Luo. Natural gas pipeline compressor stations: VOC emissions and mortality rates

Several key indicators, including the administration’s policies and responses to shale gas-related issues, demonstrate that the Shapiro Administration has not fulfilled the commitments the governor made to Pennsylvanians in general and to frontline communities in particular. However, this paper also identifies important ways the administration can correct course and work toward better health protections for Pennsylvania residents impacted by shale gas development.

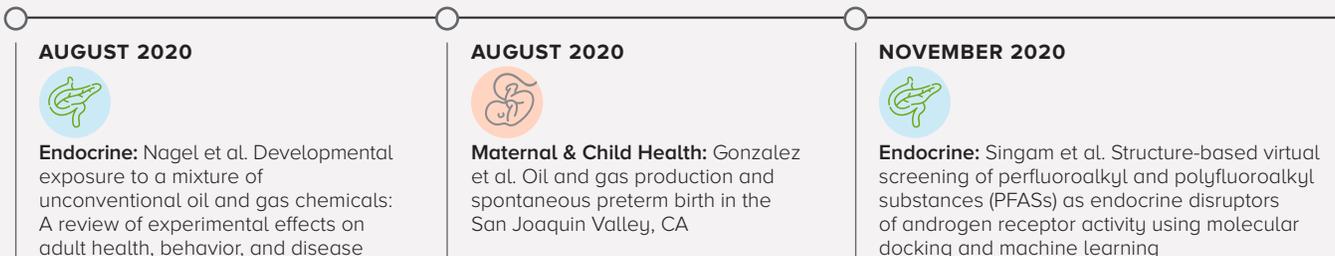
THE RESEARCH IS IN

Over the past 20 years, enough research studies and investigations have been done to clearly demonstrate many of the health risks shale gas development poses. More than 30 peer-reviewed epidemiological studies show an association between gas infrastructure and adverse health impacts for nearby residents. Hundreds of other investigations and first-hand accounts have corroborated those findings. Children, the elderly, pregnant individuals, and people with pre-existing conditions are especially vulnerable to these health impacts, as are workers in the industry, who often encounter higher levels of exposure to toxic and radioactive materials than do others.

Approximately 1.5 million Pennsylvanians live within a half mile of oil and gas wells. Millions more live within a half mile of a pipeline, compressor station, processing facility, or other shale gas infrastructure—sometimes more than one. There is no established “safe” distance, and people living near these sites experience increased risks of:

- Respiratory problems, such as asthma and chronic bronchitis
- Skin and eye irritation
- Headaches, dizziness, and nausea

RESEARCH GOVERNMENT



- Hospitalization from heart-related complications
- Cancer, particularly in those who are exposed over a long period of time
- Adverse birth outcomes, including preterm birth, low birth weight, and birth defects
- Mental health issues from noise, vibration, and light pollution
- Premature mortality in the elderly.

Taxpayer-funded research released by the University of Pittsburgh in 2023 as the Pennsylvania Health and Environment Studies (Pitt Studies) bore out these associations. Another study, performed by researchers at Carnegie Mellon University, estimated that air pollution from shale gas development activities in Pennsylvania, Ohio, and West Virginia from 2004 to 2016 resulted in 1,200 to 4,600 premature deaths in the region.

Shale gas extraction and use also contributes to climate change, which poses other health impacts for every resident of Pennsylvania, and indeed for people worldwide. Climate change increases the incidence and severity of storms, floods, wildfires, and insect-borne diseases, such as Lyme disease—all of which increase illnesses, hospitalizations, and deaths.

State-level officials have generally demonstrated a lack of awareness of the available science or simply denied the connection between shale gas development and health risks. Some have paid far more attention to securing industry accommodations than to protecting public health, and many have overestimated how well regulations actually protect people from harm.

DECEMBER 2020



Mental Health: Soyer et al. Socio-Psychological Impacts of Hydraulic Fracturing on Community Health and Well-Being

DECEMBER 2020



Cardiology, Hospitalizations: McAlexander et al. Unconventional Natural Gas Development and Hospitalization for Heart Failure in Pennsylvania

APRIL 2021



Cardiology, Hospitalizations, Mortality: Denham et al. Acute myocardial infarction associated with unconventional natural gas development: A natural experiment

JULY 2021



Maternal & Child Health: Willis et al. Associations between Residential Proximity to Oil and Gas Drilling and Term Birth Weight and Small-for-Gestational-Age Infants in Texas: A Difference-in-Difference Analysis

WHERE THE SHAPIRO ADMINISTRATION HAS MADE PROGRESS

Over the course of the last two years, the Shapiro Administration has taken a number of actions to better protect the health of residents in the Commonwealth. We applaud the governor’s efforts in these areas, despite increasing challenges at the federal level.

✓ **Plugging abandoned/orphaned wells**

Abandoned and orphaned wells represent serious public health hazards. Pollution from uncontrolled, and often unsuspected, leaks can impair the health of people living near these wells. The Pennsylvania Department of Environmental Protection (DEP) has identified more than 27,000 abandoned wells in the state, though the true number is estimated to be between 300,000 and 750,000 wells. Utilizing funding from the 2021 Infrastructure Investment and Jobs Act, the DEP has overseen the capping of more than 200 wells within the first 14 months of Gov. Shapiro’s term. The DEP also partnered with the United Mine Workers of America to institute a new registered apprenticeship program that teaches workers how to clean up oil and gas wells.

✓ **Proposing alternatives to RGGI**

With the Pennsylvania General Assembly unlikely to act on approving the Regional Greenhouse Gas Initiative (RGGI), the Shapiro Administration has turned to alternative proposals to reduce pollution and hold polluters accountable in the state, such as:

- The Reducing Industrial Sector Emissions in Pennsylvania (RISE PA) program, a \$396 million decarbonization grant opportunity for industrial polluters and a positive step in reducing greenhouse gases and co-pollutant emissions
- The Pennsylvania Climate Emissions Reduction (PACER) act, which would establish a cap-and-invest arrangement requiring power producers to pay a fair share to offset environmental impacts of pollution created by their energy generation
- The Pennsylvania Reliable Energy Sustainability Standard (PRESS), which would require Pennsylvania to get 50% of its electricity from a diverse range of energy resources by 2035, including 35% from solar, wind, and small modular reactors

GOVERNMENT

RESEARCH

OCTOBER 2021



Josh Shapiro announces candidacy for governor, campaigning on defending Pennsylvanians’ constitutional right to clean air and pure water

AUGUST 2021



Endocrine: Gonzalez et al. Iodoacetic Acid, a Water Disinfection Byproduct, Disrupts Hypothalamic, and Pituitary Reproductive Regulatory Factors and Induces Toxicity in the Female Pituitary

DECEMBER 2021



Maternal & Child Health: Willis et al. Associations between residential proximity to oil and gas extraction and hypertensive conditions during pregnancy; a difference-in-difference analysis in Texas, 1996-2009

JANUARY 2022



Mortality: Li et al. Exposure to unconventional oil and gas development and all-cause mortality in Medicare beneficiaries

It should be noted that all these proposals and programs still have some inherent drawbacks, such as continuing to prioritize use of fossil fuels and adding to the pollution burden of already-impacted communities and residents. The Shapiro Administration’s “Lightning Plan,” meant to address Pennsylvania’s energy future and promote a wide array of energy projects in the Commonwealth, persists in propagating these shortcomings.



Prioritizing DEP

During budget hearings in 2024, the Pennsylvania Department of Environmental Protection (DEP) estimated that the staff of its Oil and Gas Program, which oversees permitting and regulating the industry, was operating at about 75% capacity due to staffing shortfalls. Because of these shortfalls, DEP has often been unable to take meaningful enforcement action, failing to address many spills and other violations. To its credit, the Shapiro Administration was able to obtain a 14% increase in DEP funding in the fiscal year 2024-2025 budget, while calling for an additional 12% increase in DEP funding in the 2025-2026 budget. However, while details of the 2025-2026 budget have not yet been released, the bulk of the 2024-2025 funding was earmarked for staff in the permitting division, not the enforcement division, where a real regulatory need exists.



Promoting solar and other renewable energy projects

Pennsylvania currently ranks ahead of only Alaska in total solar, wind, and geothermal energy growth since 2013. To make up some of this lost ground, the Shapiro Administration has continued to advance the Pennsylvania Project to Utilize Light and Solar Energy (PA PULSE) initiative, enabling state agencies to source at least 53% of their annual energy consumption from renewables once several solar farms are built throughout the state. Additionally, Pennsylvania is set to receive \$156 million in federal aid from the Solar for All program to place solar panels on more than 14,000 residential homes in low-income and social justice communities, in both urban and rural areas. Likewise, the Shapiro Administration has created the Solar for Schools program, where schools can request grants to cover up to 50% of the cost of solar installations.

JANUARY 2022



Maternal & Child Health: Caron-Beaudoin et al. Volatile organic compounds (VOCs) in indoor air and tap water samples in residences of pregnant women living in an area of unconventional natural gas operations: Findings from the EXPERIVA study

MARCH 2022



Maternal & Child Health: Hill et al. Drinking water, fracking, and infant health

MARCH 2022



Respiratory: Bushong et al. Publicly available data reveals association between asthma hospitalizations and unconventional natural gas development in Pennsylvania

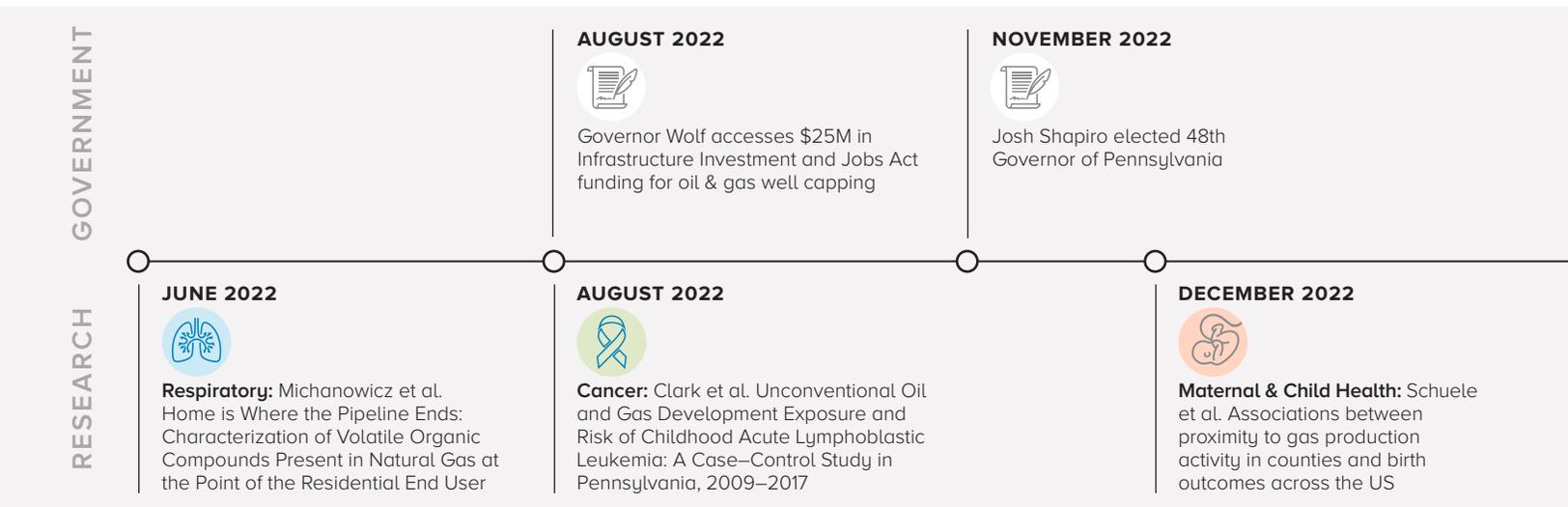


Focusing on community engagement and environmental justice

Frontline communities, especially those considered to be environmental justice communities, have suffered disproportionately large health impacts from shale gas development. It is imperative that state leaders engage with them in meaningful ways to better address the risks they face. The Shapiro Administration has taken a few steps forward in this regard:

- The DEP has established a Customer Experience Management Advisory Council to advise DEP’s leadership “on strategies and improvements to enhance service delivery to the public.”
- In September 2023, DEP published an Interim-Final Environmental Justice Policy, which incorporated input from the public and from advocacy organizations.
- In 2024, the Shapiro Administration appointed Fernando Treviño as special deputy secretary to DEP’s Office of Environmental Justice, elevating OEJ leadership to the level of a deputy secretary for the first time.
- DEP has since added Environmental Justice Regional Coordinators in each of its six regional offices.

More recently, in September 2024, the DEP announced it was applying approximately \$2 million in grant funding from the U.S. Department of Energy to develop the Renewable Energy Siting through Technical Engagement and Planning (R-STEP) program to help local communities identify the best places for wind and solar projects that can lower utility costs and fight climate change.



WHERE THE SHAPIRO ADMINISTRATION HAS FALLEN SHORT

While Gov. Shapiro’s administration has taken some definitive steps forward in better protecting the health of Pennsylvania residents from shale gas pollution during its first two years, it has fallen short on several other fronts.

! Expanding no-drill zones in Pennsylvania from the required 500 feet to 2,500 feet

In a 2020 Grand Jury Report on shale gas development, then Attorney General Shapiro recommended increasing “no drill zones”—or “setback distances”—from the legally required 500 feet to 2,500 feet in order to better protect the health of residents living near oil and gas infrastructure. As of February 2025, no meaningful, industry-wide changes had been made to setback distances.

! Requiring fracking companies to publicly disclose all chemicals used in drilling and hydraulic fracturing before they are used on-site

In January 2024, the Pennsylvania Department of Environmental Protection (DEP) announced it would implement new policy requiring gas operators to publicly disclose chemicals they use in drilling and hydraulic fracturing earlier in the well development process. However, Pennsylvania law does not require operators to publicly disclose chemical blends if they are considered proprietary or a trade secret. Consequently, many of the chemicals involved in the fracking process will still not be made available to the public, health care professionals (except in very limited situations), researchers, government officials, or emergency preparedness and response teams that require such information when leaks or spills occur.

! Acknowledging the settled science on the health risks of exposure to shale gas pollution

During the first two years of his term, Gov. Shapiro had many opportunities to acknowledge the substantial and conclusive research on health impacts from the shale gas industry. EHP and other health and community organizations provided the

JANUARY 2023



Josh Shapiro assumes office as 48th Governor of Pennsylvania

DECEMBER 2022



Maternal & Child Health: Willis et al. Congenital anomalies associated with oil and gas development and resource extraction: a population-based retrospective cohort study in Texas

DECEMBER 2022



Maternal & Child Health: Claustre et al. Assessing gestational exposure to trace elements in an area of unconventional oil and gas activity: comparison with reference populations and evaluation of variability

Shapiro Administration with information about relevant studies and investigations on several occasions. Based on the evidence to date, Gov. Shapiro has so far failed to acknowledge this research, most recently remaining silent on the Health and Environment Studies (Pitt Studies) since their release in August 2023. Instead, he has called for even more research before taking action, which will delay necessary protections for many more years.

! Directing state health agencies to meaningfully engage with frontline communities and health care providers

The Department of Health (DOH), Pennsylvania’s premiere health agency, must perform a key role in helping to protect residents exposed to shale gas pollution. In recent years, the DOH has made progress in educating residents and health care providers on the risks of exposure to toxic emissions from shale gas development. The DOH has provided continuing education to local health care providers on oil and gas pollutant exposure, created an initiative to educate schools on air quality, and introduced a new Environmental Health Complaint process. While the DOH has taken positive steps to meet with organizations and educate state residents on the health implications of shale gas pollution, it needs a clear mandate from Gov. Shapiro to act more openly regarding known health risks.

! Empowering enforcement agencies to regulate toxic emissions and to effectively penalize operators who violate regulations

The DEP’s mission is “to protect Pennsylvania’s air, land, and water resources and to provide for the health and safety of its residents and visitors...” However, the DEP has failed to fulfill this mission on several fronts. First, the DEP’s regulatory authority continues to be insufficient to foster meaningful oversight of shale gas operators. DEP field inspectors are historically understaffed, and though the DEP cited conventional and unconventional operators 102,652 times for violations between 2007 and 2023, these citations have not deterred operators from continuing to pollute, often at will.

GOVERNMENT

MARCH 2023



Members of PA legislature introduce bipartisan bills to establish community solar programs, helping address energy spikes caused by volatile gas prices

MAY 2023



DEP secures \$10M fine from Shell for air quality violations and pledges to fund environmental improvement projects in Western PA

RESEARCH

MARCH 2023



Cardiovascular, Respiratory: Trickey et al. Hospitalisations for cardiovascular and respiratory disease among older adults living near unconventional natural gas development: a difference-in-differences analysis

MAY 2023



Maternal & Child Health: Caron-Beaudoin et al. Estimation of exposure to particulate matter in pregnant individuals living in an area of unconventional oil and gas operations: Findings from the EXPERIVA study

JULY 2023



Maternal & Child Health: Gaughan et al. Residential proximity to unconventional oil and gas development and birth defects in Ohio

The Shapiro Administration has the power to strengthen regulations and improve enforcement, including more stringent penalties for violations, but has not yet done so in any meaningful way.

! Calling for legislative action to shore up legal gaps that jeopardize health

The DEP continues to operate under most of the same industry-friendly regulations put into place almost two decades ago. Some current legislators have introduced bills that would increase health protections near shale gas pollution, but each one of these bills has either been voted down or stalled in committees. Other legislators are attempting to increase favorable conditions for industry by punishing communities who seek to better protect their health through stronger local ordinances. Amid these disagreements, Gov. Shapiro could publicly engage legislators and urge passage of bills that protect residents from shale gas pollution, but like his predecessors, again, he has chosen not to.

! Regulating industry to reduce health risks

In 2020, Attorney General Shapiro was clear that oil and gas operators must be held accountable for their actions, saying:

We can't rely on big corporations to police themselves. After all, they report to their investors and their shareholders. That's their job. It's the government's job to set and enforce the ground rules that protect the public interest. And through multiple administrations, they failed to do that.

Instead, in November 2023, Gov. Shapiro announced a collaboration with CNX Resources, a heavily fined shale gas extraction company based in Canonsburg, Pennsylvania. While the governor touts this collaboration as a new model of industry cooperation and “radical transparency,” CNX has committed to little more than what is already legally required, making the governor’s support sound disingenuous in the context of his prior statements. Gov. Shapiro’s part in this deal was deeply upsetting to many members of frontline communities who were counting on his promises to hold

AUGUST 2023



DOH presents findings of Pennsylvania Health and Environment Studies (“Pitt Studies”) at community event

AUGUST 2023



Shapiro appoints Fernando Treviño as OEJ’s special deputy secretary, elevating OEJ leadership to level of deputy secretary for first time

SEPTEMBER 2023



Pipeline and Hazardous Materials Safety Administration of the US DOT suspends authorization of LNG transportation in rail tank cars

AUGUST 2023



Respiratory, Hospitalizations: Xu. Fracking Boom and Respiratory Health: Evidence from Texas

AUGUST 2023



Cancer, Maternal & Child Health, Respiratory: University of Pittsburgh School of Public Health. Hydraulic fracturing epidemiology research studies: childhood cancer case control study, asthma outcomes, and birth outcomes

industry accountable, and as of February 2025, he still has not attempted to press for rulemaking that would require more meaningful health-protective measures for the industry at large.

! Prioritizing truly clean energy

Gov. Shapiro has spoken extensively about the importance of “clean energy.” However, the administration’s definition of “clean” includes the use of fossil fuels, which will extend the timeline of fossil fuel extraction, endangering the health of those nearby and placing our planet in continued jeopardy.

Petrochemical facilities, such as the Shell ethane cracker plant in Beaver County, rely on fossil fuels to operate. While the DEP appears ready to continue to hold Shell accountable for pollution violations at the existing cracker plant, Gov. Shapiro has not yet addressed the problematic pollution of this facility. Nor has he publicly called into question the wisdom of building additional petrochemical facilities in an area already burdened with pollution from shale gas extraction, transportation, and use.

Blue hydrogen facilities, such as those planned in the Appalachian Regional Clean Hydrogen Hub (ARCH2), will necessitate thousands of miles of new pipelines and huge amounts of shale gas as feedstock from the region, leading to many more wells being drilled in areas already impacted by the toxic legacy of this heavy industry. These projects risk more uncontrolled emissions at every stage of development, not to mention raising the possibility of earthquakes and groundwater contamination.

Liquefied natural gas (LNG) facilities, which are proposed in Pennsylvania, pose immediate health and safety risks to those living nearby due to the volume of methane emissions and volatility of the production and transportation process. These risks include explosions, air and water pollution, noise, mental health impacts, and climate-warming pollution released throughout the process.

GOVERNMENT

SEPTEMBER 2023



DEP publishes interim-final Environmental Justice policy to help integrate EJ into DEP work within regulatory limits

OCTOBER 2023



US DOE announces federal funding for regional clean hydrogen hubs, including the Appalachian Regional Clean Hydrogen Hub (ARCH2)

NOVEMBER 2023



Shapiro announces “Radical Transparency” collaboration with CNX Resources with no involvement from residents

RESEARCH



In his first two years as Pennsylvania’s governor, Gov. Shapiro has publicly supported all the above fossil fuel projects, calling them good for Pennsylvania’s economy. However, it appears that he and his administration have not yet considered the negative economic impacts created by adverse health and safety outcomes for Pennsylvania residents.

! Supporting a just transition to renewable energy

The transition to renewable energy production, such as solar, wind, geothermal, and others, must happen quickly to reduce severe weather impacts due to climate change that are devastating lives and property across the globe. Further, any transition must consider the enormous health costs associated with continued or expanded fossil fuel development, especially in Pennsylvania, which has a long history of extractive industries. While the Shapiro Administration has made some progress on promoting renewable energy in the Commonwealth, it can do much more to make renewables a priority.

Gov. Shapiro has himself acknowledged that Pennsylvania has fallen behind the nation in terms of investing in green energy sources like wind, solar, and hydropower, but he has seemed reluctant to make bold commitments to renewable energy production, scaling up manufacturing of renewable technologies, or wide implementation of renewable solutions in the Commonwealth, even as fossil fuel jobs are already being replaced by plentiful and good-paying jobs in the renewable energy sector. Indeed, Gov. Shapiro’s “Ten-Year Strategic Plan for Economic Development in Pennsylvania,” as well as his 2024 and 2025 budget addresses, zeroed in on fossil fuel emissions reductions, while ignoring a chance to design and execute a comprehensive renewable energy plan.

NOVEMBER 2023



Shapiro appeals two Commonwealth Court decisions to strike down Regional Greenhouse Gas Initiative (RGGI) participation

JANUARY 2024



Shapiro urges/DEP announces new policies requiring gas operators to publicly disclose chemicals, excepting proprietary chemical blends

JANUARY 2024



Shapiro presents “Ten-Year Strategic Plan for Economic Development in Pennsylvania,” which excludes strategy for renewable energy development

JANUARY 2024



Maternal & Child Health: Shupler et al. Short-Term Increases in NO₂ and O₃ Concentrations during Pregnancy and Stillbirth Risk in the U.S.: A Time-Stratified Case-Crossover Study

WHAT THE SHAPIRO ADMINISTRATION CAN DO TO BETTER DEFEND PUBLIC HEALTH

The Shapiro Administration has room for improvement to protect Pennsylvanians’ constitutional right to clean air and pure water. Based on this assessment of Gov. Shapiro’s first two years in office, EHP suggests the following specific actions his administration can take to defend public health while prioritizing a just transition toward renewable energy:

1. Increase setback distances from shale gas infrastructure.

Setback distances (protective buffers) between shale gas operations and occupied buildings are currently governed by Pennsylvania Act 13 (2012), which established certain legal requirements around this industry. The governor can urge the General Assembly to amend Act 13 and mandate greater setbacks for all operators. While no distance has been established as “safe,” EHP recommends setback distances of at least 1 km (about 3,300 feet or 0.6 miles) for small facilities and at least 2 km (about 6,600 feet or 1.25 miles) for large facilities and from schools, nursing homes, and other structures accommodating vulnerable populations. Because farther is ultimately better for reducing health harms, the industry should not be allowed exemptions or waivers to these distances for any reason.

2. Publicly disclose all chemicals used in shale gas development.

Changing the law around chemical disclosures may require legislative action. If chemical disclosures cannot be changed through DEP rulemaking, Gov. Shapiro should press the legislature to act and require operators to fully disclose all chemicals they use, even if they are considered proprietary or a trade secret. This disclosure should ideally be made to the general public or, at a bare minimum, to government agencies, public works administrators, emergency preparedness and response teams, and medical practitioners treating affected patients, all of whom require this data. Gov. Shapiro can also urge the legislature to consider the full lifecycle of all toxic pollutants involved in shale gas development when requiring operators to disclose what they put into the ground and what comes back out during operations.

GOVERNMENT

MARCH 2024



Shapiro urges Biden administration to end moratorium on LNG export projects, setting stage for more shale gas infrastructure

APRIL 2024



RISE PA program proposed using IRA funding to promote industrial decarbonization projects, \$396M in funding announced in July 2024

RESEARCH

MARCH 2024



Cancer, Cardiology, Maternal & Child Health, Mortality, Respiratory: Aker et al. The human health effects of unconventional oil and gas development (UOGD): A scoping review of epidemiologic studies

MARCH 2024



Endocrine: Woodruff. Health Effects of Fossil Fuel–Derived Endocrine Disruptors

3. Develop a comprehensive health plan for preventing fossil fuel pollution exposure.

Holding profit-motivated industries to account is one role governments must assume to best defend residents' health. The Shapiro Administration must take a more proactive and higher profile role in defending the health of Pennsylvanians from oil and gas pollution with a comprehensive health response. Such a response would include an honest recognition of the health impacts associated with shale gas development and sufficient provisions for fully funded and staffed agencies with strong enforcement authority.

Epidemiologic research showing serious health impacts from shale gas development is already substantial and sufficient to inform swift action. Gov. Shapiro must acknowledge the inherent health risks in these operations and task his agencies with taking appropriate action to reduce these risks. This research includes the findings of the Pennsylvania Health and Environment Studies (Pitt Studies), which Gov. Shapiro has yet to acknowledge.

The Pennsylvania Department of Health (DOH) has recently taken a more open approach to confronting health harms experienced by communities on the front lines of shale gas development, but much more could be done with adequate support from the governor. Adequate support could enable this agency to create and distribute comprehensive resources, actionable guidance, and suitable response/investigations near existing facilities, as well as provide Health Impact Assessments and evaluations of additional considerations for Environmental Justice communities before the permitting and development of new facilities.

The Pennsylvania Department of Environmental Protection (DEP) has regulatory authority over the shale gas industry and must hold it accountable by requiring accurate and timely monitoring and reporting of regular emissions and upsets, providing public access to collected data, and strictly enforcing rules and regulations with fines and other meaningful punitive consequences. Other high-priority items should

MAY 2024



PRESS and PACER legislation introduced to save ratepayers money, create energy jobs, and generate investment in reliable energy sources

JULY 2024



Governor Shapiro signs 2024-25 Commonwealth Budget with 14% increase (nearly \$32.5M) for DEP

JULY 2024



Shapiro signs Carbon Capture and Sequestration Act, allowing Environmental Hearing Board to force landowners to store CO₂ without their consent

JUNE 2024



Cancer: Hoang et al. Residential proximity to oil and gas developments and childhood cancer survival

include closing hazardous waste loopholes, monitoring radioactivity at shale gas sites and landfills, requiring safer transport of the contaminated waste created from drilling sites, and regulating gathering lines, which are used to transport shale gas hundreds of miles, reducing opportunities for leaks, explosions, and other health risks throughout.

4. Address cumulative emissions when permitting sites.

As part of its permitting process, the DEP should cumulatively analyze emissions—all sources of air pollution in a given area—to accurately assess air quality and to limit shale gas development in airsheds that are already burdened with pollution. Currently, shale gas facilities are permitted for air pollution emissions as stand-alone entities, but emissions from a new facility, when combined with other existing emission sources nearby, may result in dangerous exposure levels in the ambient air, which may cause adverse acute and chronic health impacts. For that reason, such considerations must be included in the permitting process.

5. Increase funding for state agencies to better fulfill their missions.

Gov. Shapiro must put forward—and the General Assembly must approve—state budgets that include adequate funding to agencies like the DOH and the DEP so that they can effectively do their job of protecting Pennsylvania’s resources and the health of residents. While the increase in DEP funding approved in the 2024-2025 budget and the request for more DEP funding in the 2025-2026 budget are a start, more funds must be channeled to the enforcement arm of DEP and to effective monitoring of public exposure to pollutants from the shale gas industry and other sources. Similarly, the DOH must be fully funded to do the difficult but essential work of addressing health concerns from impacted residents and disseminating timely guidance.

6. Initiate more transparency and interaction with impacted communities.

Gov. Shapiro must call on the DOH and the DEP to work more closely and transparently with communities, providing potentially impacted residents with health-protective strategies to combat pollution exposure and ensure that the voices of

GOVERNMENT

AUGUST 2024



US DOE announces \$30M in funding for ARCH2, which will largely use fracked methane to produce hydrogen

SEPTEMBER 2024



DEP secures \$1.96M from US DOE for renewable energy projects through R-STEP program

SEPTEMBER 2024



Shapiro Administration commits to additional \$76M in federal funding for oil & gas well plugging

RESEARCH

SEPTEMBER 2024



Mental Health: Willis et al. Residential Proximity to Oil and Gas Development and Mental Health in a North American Preconception Cohort Study: 2013-2023

residents, especially those experiencing environmental and health harms, are heard. These residents should know whom to contact when they have an issue or where to go for relevant information, and the appropriate agency should acknowledge, act upon, and respond to any resident’s communication in a timely manner. The DOH should continue to inform medical providers about health risks from shale gas development so that they can share guidance with patients to help mitigate those risks. Elevating the Environmental Justice Office of the DEP is a good start, but more can be done to support two-way communication with residents and to elevate their experiences when developing health-protective policy.

7. Take a precautionary approach to petrochemicals, blue hydrogen, and LNG.

Industries that use fossil fuels require proactive and comprehensive oversight. If allowed to operate at all, these industries must be compelled to effect stringent emissions detection and reporting, working with communities to reduce exposure and to alert the public of the content of its releases, whether planned or accidental. Government agencies must be intrinsically involved in making sure industry complies with pollution standards, holding operators accountable when they do not. Further, health impact assessments and other community health monitoring must be put in place to ensure residents’ health is protected today and into the future. Residents must be informed fully about health risks to which they are or will become exposed, communities must be given a say as to whether this development happens within their borders, and clear channels of communication between governmental agencies, industrial operators, and community leaders must be established and supported as long as shale gas development is allowed to operate.

8. Work boldly and creatively to transition away from fossil fuels and toward renewable forms of energy.

The Shapiro Administration must take bold steps to raise Pennsylvania from its lowly position of lagging the rest of the country in renewable energy creation to one where renewable energy becomes a primary health-protective driver of the state’s economy.

JANUARY 2025



Shapiro introduces Lightning Plan to address Pennsylvania’s energy future and promote a wide array of energy projects in the Commonwealth

FEBRUARY 2025



Shapiro proposes 2025-2026 budget increases for DOH & DEP to support agency work

OCTOBER 2024



Maternal & Child Health: Boland et al. A National Study of the Associations between Hormonal Modulators in Hydraulic Fracturing Fluid Chemicals and Birth Outcomes in the United States of America: A County-Level Analysis

The continued reliance and emphasis on fossil fuel-sourced industries will only put the state farther behind this goal. A just energy transition must begin today, and it must have the full force of Gov. Shapiro's voice and the full attention of his administration and the agencies that work for him. Only then can the Shapiro Administration say that it is truly working to protect the health and wellbeing of all Pennsylvanians.

CONCLUSION

In the press release that accompanied the Grand Jury Report on shale gas development in June 2020, then Attorney General Shapiro called for strong action:

Our government has a duty to set, and enforce, ground rules that protect public health and safety. We are the referees; we are here to prevent big corporations and the powerful industries from harming our communities or running over the rights of citizens. When it comes to fracking, Pennsylvania failed. Now it's time to face the facts and do what we can to protect the people of this commonwealth by encouraging the Department of Environmental Protection to partner with us and by passing the Grand Jurors' common-sense reforms.

But as frontline residents have expressed, it seems that Gov. Shapiro's actions are not reflective of Attorney General Shapiro's words.

The field of public health is characterized by swift action to reduce the risk of harm, sometimes based on limited information available at the time. Thanks to years of study after study, we no longer have limited information about the adverse health impacts of shale gas development. Nevertheless, we have yet to see Pennsylvania's leaders—including the Governor's Office, state agencies, and the General Assembly—take meaningful action to protect Pennsylvanians from health harms brought on by continued reliance on fossil fuels.

Other states have made great progress in embracing the renewable energy economy by leveraging federal dollars to boost job creation and put their communities on a path to greater economic prosperity. Pennsylvania is on the verge of being left behind, but that does not have to be its legacy. With its strong roots in manufacturing, its expertise in technology and medical research, and an existing workforce that is energy-oriented, Pennsylvania has what it takes to become a renewable energy leader, creating sustainable jobs, reducing health impacts and health care costs, and saving lives.

Gov. Shapiro has had ample time to introduce new policies and use his position of power to influence legislators and other decision makers when it comes to protecting residents from health risks associated with shale gas development. The governor can still address this vital issue during this term, but the clock is ticking. Many residents continue to deal with the serious health consequences of a polluting industry operating where they live, work, play, learn, worship, and heal. We call on Gov. Shapiro to acknowledge the health risks associated with shale gas and become a leading force in protecting Pennsylvanians from these very real harms.

