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Written Testimony on DEP's Guidelines for Greenhouse Gas Emissions from Existing Oil & Gas Facilities Submitted to the Joint Meeting of Citizens Advisory Council and the Environmental Justice Advisory Board Tuesday, November 12, 2024

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Members of the Citizens Advisory Council and the Environmental Justice Advisory Board:

Thank you for the opportunity to submit written testimony on the serious health impacts associated with shale gas pollution. To those of you who don't know me, my name is Alison L. Steele, and I serve as executive director of the Environmental Health Project, a data-driven public health nonprofit headquartered in Pittsburgh that defends frontline communities from oil and gas pollution.

I want to direct my comments to DEP's guidelines for Greenhouse Gas Emissions from Existing Oil & Gas Facilities.

There are many good reasons for implementing strong guidelines to control methane emissions, and one of the most compelling is that such guidelines will better protect public health from pollution emitted by the shale gas industry.

Millions of Pennsylvanians live within a half mile of a well pad, compressor station, processing operation, power plant, storage facility, pipeline, petrochemical plant, or other shale gas-related infrastructure. Some families live close to more than one of these.

As my organization has seen first-hand, shale gas pollution threatens the health and wellbeing of these families. If seeing is not believing, more than thirty epidemiological studies show a correlation between shale gas development and health impacts for residents living nearby.[1] Hundreds of other investigations have shown that shale gas development

[1] Environmental Health Project (2023, May). Health Impacts of Shale Gas Development: A Collection of Research. https://www.environmentalhealthproject.org/_files/ugd/a9ce25_feddfe7415ba4d3b894e94821aa40aab.pdf

correlates with poor health outcomes for people living in proximity to such infrastructure.[2]

Health impacts from living near shale gas development include a higher risk of:

- A range of respiratory problems like asthma, chronic bronchitis, and reduced lung function
- Headaches, dizziness, and nausea
- Hospitalization from heart-related complications
- Cancer, particularly in those who are exposed over a long period of time
- Adverse health effects for pregnant individuals, including preterm birth, low birth weight, and birth defects in infants
- Mental health issues from noise, vibration, and light pollution and the associated stress of shale gas industry activity
- Premature mortality in the elderly.[3]

One 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.[4]

Industry workers are especially vulnerable to health impacts from shale gas operations. According to OSHA, safety and health hazards or dangerous conditions that can lead to fatalities include vehicle and equipment accidents, explosions or fires, falls, and exposure to high levels of toxic chemicals.[5] Waste handling puts workers at particular risk of exposure to toxic and radioactive substances.[6]

The Pennsylvania Health and Environment studies, three taxpayer-funded studies the University of Pittsburgh and the Pennsylvania Department of Health released in 2023,

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[2] Concerned Health Professionals of NY. (2023, October 19). Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking and Associated Gas and Oil Infrastructure, Ninth Edition. https://concernedhealthny.org/compendium/

[3] Harvard T.H. Chan School of Public Health. (2022, January 27). Living near or downwind of unconventional oil and gas development linked with increased risk of early death. https://www.hsph.harvard.edu/news/press-releases/living-near-or-downwind-of-unconventional-oil-and-gas-development-linked-with-increased-risk-of-early-death/

[4] Mayfield, E. N., Cohon, J. L., Muller, N. Z., Azevedo, I. M. L. & Robinson, A. L. (2019, November 18). Cumulative environmental and employment impacts of the shale gas boom. Nature Sustainability, 2: 1122–1131. https://doi.org/10.1038/s41893-019-0420-1

[5] U.S. Department of Labor, Occupational Safety and Health Administration. (N.D.) Oil and Gas Extraction: Health Hazards Associated with Oil and Gas Extraction Activities. https://www.osha.gov/oil-and-gas-extraction/health-hazards

[6] Pribanic, J. B. (2023, December 10). "I Turned Blue": Workers Share Horrifying Experiences Treating Fracking Wastewater. *Public Herald*. https://publicherald.org/i-turned-blue-workers-share-horrifying-experiences-treating-fracking-wastewater/

looked at the prevalence of several health risks for people living in proximity to shale gas development in Southwestern Pennsylvania.[7]

These studies revealed higher risks of asthma, childhood cancer, and adverse birth outcomes for people living near well pads. Some of those impacts were noted at distances as far as 10 miles away, since the largest buffer of the studies was 10 miles, but the studies also demonstrated even higher risks at closer buffers.

Shale gas development impacts the health of people living in proximity to shale gas operations, but this heavy extractive industry poses other health impacts for every resident of Pennsylvania, and indeed every living being worldwide, no matter where they reside.

Climate change causes escalating storms, floods, wildfires, and insect-borne diseases, such as Lyme disease—all of which increase illnesses, hospitalizations, and deaths.

Heat waves are especially serious health consequences of climate change. Since the 1960s, heat waves have increased in intensity, duration, frequency, and length of heat wave season across the board.[8] According to the Pan American Health Organization, while some deaths are caused directly by heat, many more are caused by the exacerbation of already existing conditions, primarily cardiopulmonary, renal, or psychiatric diseases.[9]

The research is clear. Shale gas pollution is a serious health risk for all Pennsylvanians. DEP rules that curb such pollution and distance it from human exposure are necessary to reduce health harms and save lives. This is especially true for vulnerable populations, such as the elderly, kids, pregnant individuals, and those with pre-existing conditions.

Today, I invite you—protectors of Pennsylvania citizens and advocates for environmental justice—to urge the DEP and Governor Shapiro to be ambitious in adopting a strong and sensible methane rule for Pennsylvania, one that promotes public health and defends families from dangerous oil and gas pollution.

Thank you for your time and your consideration.

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[7] University of Pittsburgh School of Public Health. (2023, July 31). Final Report for Pennsylvania Department of Health, Bureau of Epidemiology, Hydraulic Fracturing Epidemiology Research Studies https://www.pa.gov/en/agencies/health/programs/environmental-health/oilgas.html#:~:text=ONGP%20Information

[8] Environmental Protection Agency (EPA) & National Oceanic and Atmospheric Administration (NOAA). (2024, June). Climate Change Indicators: Heat Waves. https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves

[9] Pan American Health Organization & World Health Organization. (2024). Extreme Meteorological Events: Heat Waves. https://www.paho.org/en/campaigns/extreme-meteorological-events#olas-calor