MARCELLUS SHALE COALITION

June 17, 2024

Jessica Shirley, Acting Secretary
Department of Environmental Protection
16th Floor Rachel Carson Building
400 Market Street
Harrisburg, PA 17101

Dr. Debra Bogen, Acting Secretary
Department of Health
Room 631 Health & Welfare Building
625 Forster Street
Harrisburg, PA 17101

Dear Acting Secretary Shirley & Acting Secretary Bogen:

You recently received a letter dated June 5, 2024 from the chair of the Department of Environmental Protection's Air Quality Technical Advisory Committee (AQTAC) regarding the studies related to unconventional natural gas development conducted by the University of Pittsburgh. These studies, costing taxpayers over $2.5 million, were commissioned under the Wolf Administration.

While our understanding is that this letter was not actually deliberated and discussed by the members of AQTAC, we will leave it to the AQTAC Committee to discern how communications sent on its behalf should be handled.

Unfortunately, the letter carries forward misrepresentations of health impacts tied to unconventional natural gas development that are being attributed to the University of Pittsburgh studies (studies). To be clear, these studies contained little if any new research and amounted to efforts to tie associations and correlations of health outcomes to a specific industry. For all of the studies' shortcomings, even its authors acknowledged the inherent limitations of their efforts.

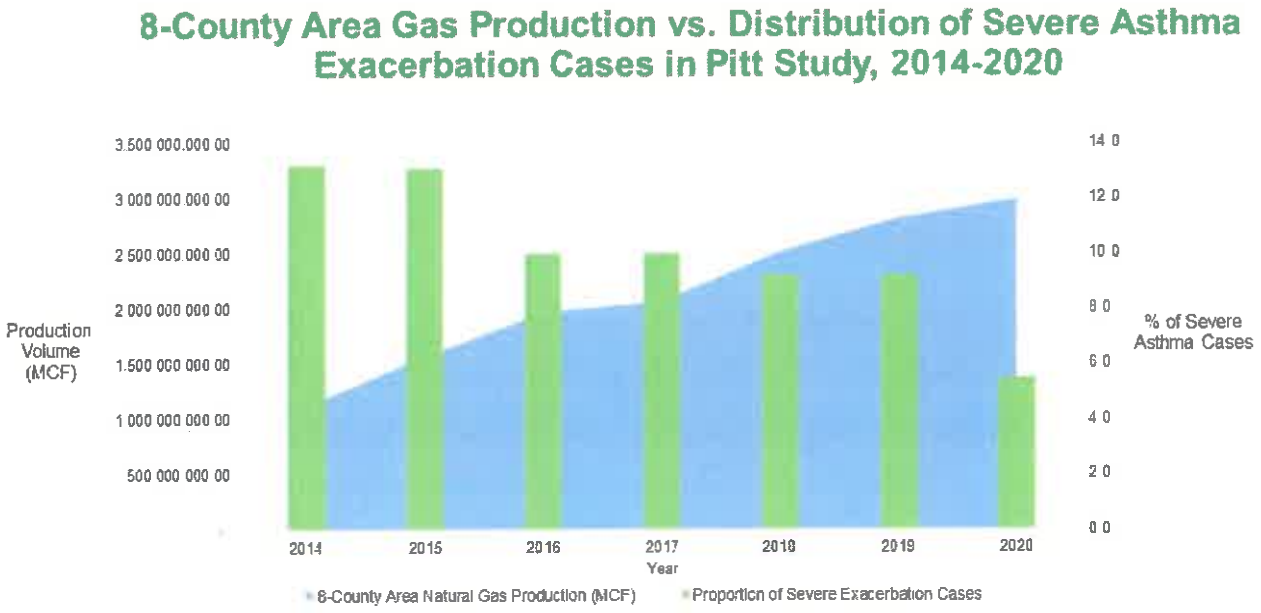
The June 5th letter urges both of your departments to consider additional studies to follow up on those prepared by the University of Pittsburgh. However, in doing so this recommendation exacerbates one of the fundamental shortcomings of the University of Pittsburgh studies, namely a singular focus on unconventional natural gas development as a causation factor for potential adverse health effects. To be meaningful and determinative, any health study should not be limited to or overly focused upon one industry as the potential cause of health impacts. Rather, the Department of Health should first determine IF any such disproportionate health impacts actually have occurred and if so, investigate all potential causes without prejudice. This approach – widely recognized by established research professionals – is directly contrary to the recommendation contained in the June 5th letter.

Concerningly, the letter uses as justification asserted outcomes of the University of Pittsburgh studies that simply are not accurate. I am attaching for your information an overview of key takeaways and limitations of the studies. However, I wish to draw your attention to one specific claim carried forth in the June 5th letter and ostensibly tied to the mission and subject area focus of AQTAC: severe asthma attacks.

The June 5th letter re-asserts that there was an increased association between asthma attacks and the production phase of unconventional natural gas development. And while headlines and key takeaways prepared by the University of Pittsburgh researchers did indeed carry this message, the researchers' own data did not.

The University of Pittsburgh researchers failed to overlay the timing and correlation of severe asthma attacks against the increase of natural gas production within the study region – even though the data to do so was readily available. Based upon this data, however, it becomes clear that the percentage of severe asthma attacks *declined by over 50%* during the study period even though natural gas production *increased by over 200%*.

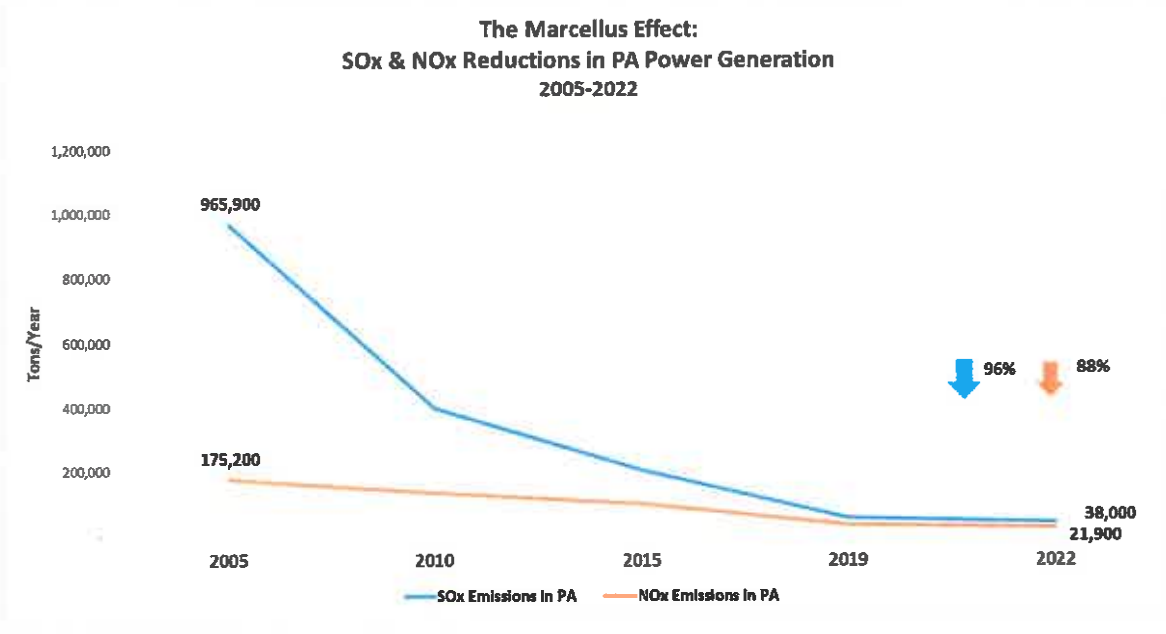
This dramatic decline even factors in the researchers' flawed approach of including 'mild' or 'moderate' asthma attacks as 'severe', which significantly overstates the number of actual 'severe' asthma attacks. Even including this flawed approach, if there is any correlation to be found, it is that the number of mild, moderate and severe asthma attacks *decreased* as natural gas production increased. This data is demonstrated in the chart below:



This reduction in asthma attacks is not surprising, considering the significant improvement which has occurred in Pennsylvania's air quality over the past fifteen years. For example, according to the PA Department of Environmental Protection's (PA DEP) own data, SOx and NOx from Pennsylvania's electric power generation sector are down 96% and 88%, respectively[1], from 2005 through 2022 thanks in large part to the increased use of natural gas for Pennsylvania electric power generation.[2] This translates to between $450 billion and $1.04 trillion in public health benefits according to U.S. Environmental Protection Agency methodologies, which also have been utilized by PA DEP.

[1] PA DEP Air Emissions Report – Accessed April 2024

[2] Pennsylvania has gone from producing <5% of electricity from natural gas in 2005 to 59% from natural gas in 2023.



I appreciate your review and consideration of this information. The natural gas industry and its employees are rightfully proud of the environmental contributions they have made to improve the quality of life for their fellow Pennsylvanians.

As we have done in the past, I again underscore our desire and commitment to work cooperatively with both of your departments on ensuring the safety, health and well-being of the communities in which we operate, while also recognizing the substantial and historic improvements achieved to date.

Sincerely,

David Callahan
President

Attachment

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University of Pittsburgh Health Studies

Overview

In December 2020, the Wolf Administration provided a $2.58 million, no-bid contract to the University of Pittsburgh (Pitt) aimed at correlating public health issues with unconventional natural gas development. Pitt looked at three specific issues – childhood cancer, asthma and birth outcomes – within an eight-county region of southwestern Pennsylvania. The studies were released publicly in August 2023.

Pitt conducted an observational study that consisted of examining written health records and conducting a limited number of interviews. The majority of funds (94%) went to researcher salaries, benefits and administrative overhead costs. No new research was conducted, and Pitt researchers refused invitations to visit natural gas sites or speak directly with industry experts.

Despite these and other shortcomings, Pitt researchers failed to establish any causal link between natural gas development and adverse health impacts. Below are key takeaways from each of these studies.

Childhood Cancer

- *"No evidence was found to support an association between exposures to [natural gas] activities and other environmental factors and the risk of leukemia, [central nervous system] tumors, and malignant bone tumors, including [Ewing's Family of Tumors],"* said Pitt researchers.

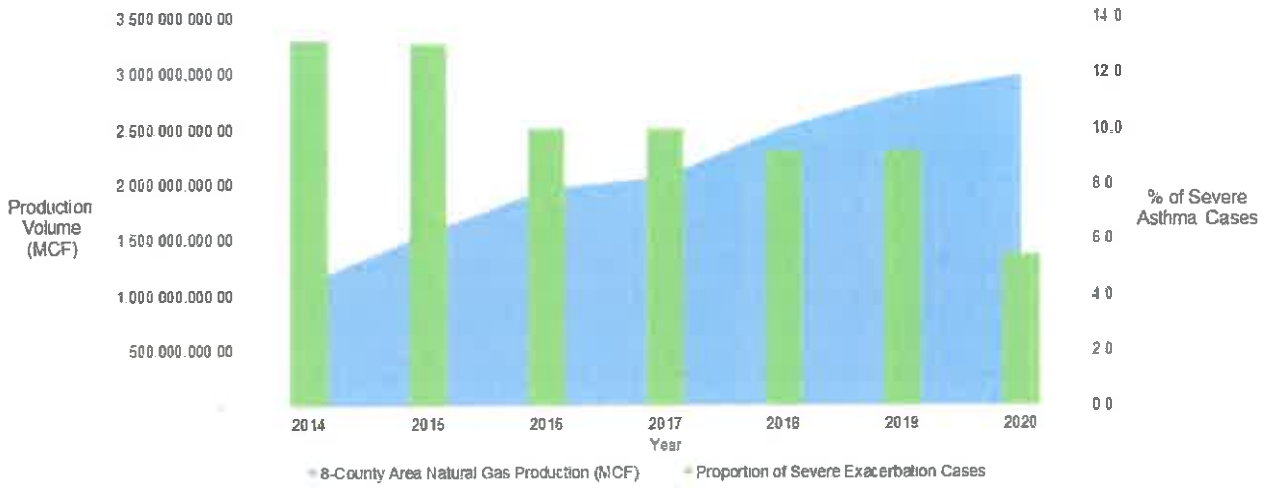
- Association with lymphoma was extremely low and underscores the limits of the studies' methodologies:
  - Assumed people do not move from their residence at birth.
  - Failed to consider smoking status, prenatal care and other genetic/lifestyle factors.
  - Failed to identify the age of diagnosis or associate time of diagnosis with any known exposures.
  - Estimated risk of lymphoma remains extremely low: 0.006% - 0.0084%.

Asthma

- Pitt researchers deviated from accepted standards in medical studies and categorized all asthma cases as 'severe', despite many such cases meeting the accepted definitions of either 'mild' or 'moderate'. The American Thoracic Society estimates that between 5-10% of asthmatics have a 'severe' case, yet Pitt's study estimated this percentage at around 40% - a clear deviation from commonly held medical understandings of asthma.

- Despite the researchers suggesting that residents in proximity to natural gas production were more likely to suffer from a severe asthma attack, their data demonstrates otherwise.

- In fact, between 2014–2020 severe asthma cases in the study region *declined by over 50%*, despite natural gas production *increasing by over 200%* in the study region.



Birth Outcomes

- Researchers identified no specific adverse birth outcomes related to natural gas development.
- Lower birthweights (3400 grams) identified in the study region were still well within the national average of 2400 – 4000 grams and "pose little health risk".
- Common causes of low birthweight, such as smoking or alcohol consumption, were not factored into the study.
- Researchers suggested that fine particulate matter in the air *may* have been a causal exposure pathway, yet state and federal environmental data shows that particulate matter concentrations actually *declined* in the region during the study period.
- Pitt's data showed that the odds of a pre-term birth were actually *higher* for those living with no natural gas activity near the mother's residence during pregnancy.

Where Can I Learn More?

To learn more, please visit www.marcelluscoalition.org/resources/healthstudies or click on any of the following links:

- MSC Letter to PA General Assembly
- Very Little Correlation & No Causation in Pitt Health Studies
- Pitt Studies Contain Serious Methodological Flaws
- Health & Environmental Impacts Studies Fact Sheet