Nathan Eachus- CCAC (3 Public Testimonies) 2024-2025

August 22nd 2024 CCAC Testimony

Dear DEP Climate Change Advisory Committee,

Thank you for the opportunity to testify today.

Climate change education involves teaching people about the science, impacts, and mitigation strategies related to climate change. It covers various aspects, including Understanding the greenhouse effect, carbon cycle, and the role of human activities in increasing greenhouse gas emissions. Understanding climate change impacts means learning about the effects of climate change on weather patterns, ecosystems, sea levels, and human health. Exploring ways to reduce greenhouse gas emissions through renewable energy, energy efficiency, sustainable agriculture, and conservation efforts are strong mitigation strategies. Adaptation is very important when teaching how communities can adapt to changes that are already happening, such as building resilient infrastructure and preparing for extreme weather events.

Climate change education often integrates science, economics, politics, and ethics to provide a comprehensive understanding of the issue. Recently, Stanford-led research shows methane emissions from a large share of U.S. oil and gas facilities are three times higher on average than the level predicted by official government estimates. Also, an Environmental Defense Fund Study showed 4x higher emissions than what the EPA has previously estimated. The O&G industry has significantly underreported their methane/ GHG emissions.

Penn State University has been conducting significant research on reducing methane emissions from dairy farms, which is crucial for addressing climate change. The research, supported by a $25 million grant from the U.S. Department of Agriculture, focuses on implementing "climate-smart" practices across 70 farms in Pennsylvania. These farms will include a diverse range of sizes and ownerships, including those from underrepresented groups.The goal of the study is to identify effective methods to cut methane emissions, a potent greenhouse gas, and to validate the effectiveness of carbon offset initiatives. The research will not only benefit local farmers by helping them reduce their environmental impact but will also contribute to broader efforts to mitigate climate change

Overview of Methane Pollution

Methane (CH_4) is a potent greenhouse gas with a global warming rate of 80 times greater than carbon dioxide (CO_2) over a 20-year period. It is a primary component of natural gas. Methane emissions occur during various stages of natural gas production, including extraction, processing, and transportation. Additionally, methane is released through flaring, a practice used to burn off excess gas, and from other industrial activities.

Flaring

Flaring is a process used to burn off excess natural gas that cannot be processed or transported. This produces significant amounts of CO2 and other pollutants. Flaring is common in oil and gas extraction sites where the infrastructure for gas capture and transport is insufficient or economically unfeasible.

Implications of Flaring and the Climate Impact: Flaring converts methane into CO2, The combustion process releases CO2 and other harmful pollutants, exacerbating global warming and climate change.

Climate Change and Methane

Methane emissions significantly contribute to climate change due to their high global warming potential. The release of methane accelerates the greenhouse effect, leading to:

Increased Global Temperatures: Higher concentrations of methane in the atmosphere lead to faster warming trends and contribute to extreme weather events, including heatwaves, heavy rainfall, and severe storms.

Methane emissions are often accompanied by the release of volatile organic compounds (VOCs). VOCs are a group of organic chemicals that can have detrimental effects on air quality and public health.

Ozone Formation: VOCs react with nitrogen oxides (NOx) in the presence of sunlight to form ground-level ozone (O3), a major component of smog. Ground-level ozone can impair lung function and contribute to respiratory conditions such as asthma.

Particulate Matter: Some VOCs can contribute to the formation of fine particulate matter (PM2.5), which can penetrate deep into the lungs and cardiovascular system, leading to heart disease and other health issues.

Public Health Risks

Methane pollution and associated VOCs pose several risks to public health:

Respiratory Issues: Exposure to high levels of VOCs and ground-level ozone can lead to respiratory problems, including asthma, bronchitis, and other chronic lung conditions.

Cardiovascular Health: Long-term exposure to fine particulate matter (PM2.5) from VOCs can increase the risk of cardiovascular diseases, including heart attacks and strokes.

Cancer Risks: Certain VOCs, such as benzene, are known carcinogens that can increase the risk of developing cancer, particularly leukemia and other blood cancers.

In summary, methane pollution from natural gas operations, combined with flaring and associated VOC emissions, poses significant risks to climate stability and public health. Addressing these issues through improved technologies, stricter regulations, and a transition to cleaner energy sources is essential for mitigating the adverse effects of methane pollution.

I also suggest that an Agenda Topic for the October 22 2024 meeting should include O&G wastewater dumping on PA rural dirt roads which ultimately exacerbates climate change.

That concludes my testimony for today. Thank you.

-Nathan Eachus

PA Citizen

Luzerne County

October 22 2024 Testimony

Hello,

Thanks for the opportunity to testify today.

I submitted my public testimony for the August 20th Climate Change Meeting and my submission was confirmed by Lindsay Byron, DEP Staff Member. Having met all public requirements to provide public testimony to the DEP Climate Change Advisory Committee, I noticed that you paraphrased my 3-page testimony to 3 sentences in the August 20th Climate Change Meeting minutes. First off, what gives the DEP Climate Change Advisory Committee the right to edit public testimony? I suggest the DEP Climate Change Advisory Committee allow my public testimony to be entered into the record in its entirety in the official Climate Change Advisory Committee August 20th final meeting minutes.

Over the past 6 years the Oil and Gas industry has dumped 3.5 million gallons of highly toxic, radioactive drilling wastewater that has been disposed of on PA rural dirt roads. Dumping oil and gas wastewater on PA rural roads exacerbates climate change, causes water contamination, increases cancer rates, disrupts ecosystems, and increases GHG emissions.

In 2023 the PA DEP reported that 86% of conventional oil and gas well owners did not report how much waste they generated and where they disposed of it. This accounts for 32,500 wells and again over millions of gallons of hazardous wastewater dumped and not accounted for by the PADEP as this wastewater reporting is required. According to a Penn State Study by Burgos, 25 of 31 Oil and Gas wastewater chemicals exceed EPA limits for radioactivity and nuclear levels by nearly 10x or more. Recently, Pennsylvania ranked 2nd in the United States for highest cancer rate among all states.

In early October 2024, the DEP issued violations to seven shale gas well drillers for failure to submit monthly waste generation, disposal and gas production reports including one company who didn't report each of the past 3 years. Both conventional and unconventional drilling are contributing to climate change tremendously as both industries are not accountable for their hazardous radioactive wastewater dumping on PA rural roads.

Methane leaks during natural gas extraction, transportation, and processing are a major source of climate warming. Methane is over 80 times more powerful at warming the atmosphere than CO2 in a 20 year span. Oil and gas operations also produce significant amounts of CO2 through combustion processes like flaring.

Emissions from oil and gas activities have contributed to the frequency and intensity of extreme weather events. For instance, the rise in global temperatures due to GHGs has been linked to more severe hurricanes, wildfires, and floods. These extreme weather events lead to loss of life, displacement of EJ communities, and massive economic damage, further demonstrating the far-reaching effects of oil and gas emissions on the climate.

Oil and gas operations contribute to climate change through methane leaks, VOC emissions, and GHG emissions, which worsen global warming and lead to more extreme weather events, pollution, and long-term environmental changes. This concludes my testimony for today.

-Nathan Eachus

Feb 18th 2025 CCAC Testimony

Hello,

Thanks for the opportunity to testify today.

I submitted my public testimony for the August 20th and October 22nd Climate Change Meetings and my submission was confirmed by Lindsay Byron, DEP Staff Member. Having met all public requirements to provide public testimony to the DEP Climate Change Advisory Committee, I noticed that you paraphrased my 3-page testimony to 2 sentences in both the August 20th and Oct 22nd Climate Change Meeting minutes which is why I am testifying once again today. First off, what gives the DEP Climate Change Advisory Committee the right to edit a citizen's public testimony in both meetings? I was the only person to publicly testify in both meetings and my testimony was paraphrased by CCAC Staff for each meeting. This is unacceptable. I suggest the DEP Climate Change Advisory Committee allow my public testimony to be entered into the record in its entirety in the official Climate Change Advisory Committee August 20th/October 22nd final meeting minutes. Your attempt to delete my public comments goes against Public Testimony Rules in the State of Pennsylvania. I suggest my entire testimony be submitted to the fullest word for word and not Paraphrased. So Here I am today,

once again, calling out this Climate Change Advisory Committee for trying to bury my Public Comments because you don't like what my testimony reads.

Over the past 6 years the Oil and Gas industry has dumped 3.5 million gallons of highly toxic, radioactive drilling wastewater that has been disposed of on PA rural dirt roads. Dumping oil and gas wastewater on PA rural roads exacerbates climate change, causes water contamination, increases cancer rates, disrupts ecosystems, and increases GHG emissions.

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Methane leaks during natural gas extraction, transportation, and processing are a major source of climate warming. Methane is over 80 times more powerful at warming the atmosphere than CO2 in a 20 year span. Oil and gas operations also produce significant amounts of CO2 through combustion processes like flaring.Emissions from oil and gas activities have contributed to the frequency and intensity of extreme weather events. For instance, the rise in global temperatures due to GHGs has been linked to more severe hurricanes, wildfires, and floods. These extreme weather events lead to loss of life, displacement of EJ communities, and massive economic damage, further demonstrating the far-reaching effects of oil and gas emissions on the climate.

Oil and gas operations contribute to climate change through methane leaks, VOC emissions, and GHG emissions, which worsen global warming and lead to more extreme weather events, pollution, and long-term environmental changes.

I expect my testimony to be written into the meeting minutes word for word in the documented meeting minutes for February 18 2025.

This concludes my testimony for today. -Nathan Eachus, Concerned PA Citizen