

**CONGRESS OF THE UNITED STATES  
HOUSE OF REPRESENTATIVES**

**Oral Testimony before the  
Committee on Natural Resources  
Subcommittee on Energy and Mineral Resources**

**Hearing entitled “*Oil and Gas Development: Impacts on the Climate  
and the Costs of Business as Usual*”**

**July 16, 2019**

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Bringing science  
to energy policy



Chairman Lowenthal, Ranking Member Gosar and distinguished Members of the Subcommittee, it is an honor to appear before you today.

By way of background, I am an environmental public health scientist and the executive director of PSE Healthy Energy, a multidisciplinary, nonpartisan, nonprofit research institute that studies the way energy production and use impacts public health and the environment. I also hold formal research affiliations at the University of California, Berkeley and at Lawrence Berkeley National Lab.

My testimony is based on a strong body of science supported by decades of peer-reviewed research on climate change and about a decade of peer-reviewed research on the health dimensions of oil and gas development.

Oil and gas are fossil fuels that pose well-understood risks to the climate. There is strong scientific consensus that we are in a climate emergency and only have a limited period of time to dramatically reduce greenhouse gas emissions to avert dire economic, health, security and ecological consequences. I am in front of you today as a scientist, but also as a father with an interest in protecting the health, security and livelihoods of my children.

In 2016, the U.S. Bureau of Land Management (BLM) began down an emission reduction path when it adopted a rule entitled “Waste Prevention, Production Subject to Royalties, and Resource Conservation.” The stated purpose of this rule was to reduce emissions of methane – a potent greenhouse gas – and health-damaging volatile organic compounds that are co-emitted with methane during oil and gas development and negatively impact local and regional air quality and public health (Federal Register 2016). These volatile organic compounds include benzene, a known human carcinogen.

During the first year of implementation the repair of leaks and control of vapor from storage tanks would have reduced emissions of methane by more than half and health-damaging VOCs by approximately 70%. According to the Federal Register, these changes required would have reduced profit by the oil and gas industry by only 0.15% (Federal Register 2016).

However, in March 2017, President Trump issued Executive Order (EO) 13783 which initiated the process of largely rescinding the BLM rule and in September 2018 virtually all portions of the BLM rule were rescinded (Federal Register 2018).

In addition to well documented climate risks due to the emission of carbon dioxide and methane, oil and gas development poses direct hazards, risks, and impacts to human health largely through exposures to chemicals and other stressors that are accidentally and intentionally released to water, air and soil.

An evaluation of the peer-reviewed literature on air, water and human health impacts of shale gas development concluded that 87% of air quality studies indicated impacts to air quality; 69% of water quality studies found associations with water quality impairment; and 84% of public health studies reviewed indicated public health hazards, elevated health risks, or adverse health outcomes (Hays and Shonkoff, 2015).

The majority of peer-reviewed studies on air quality and human health near oil and gas development have concluded that oil and gas emissions of health damaging air pollutants tend to be more concentrated near oil and gas development infrastructure than further away. Studies suggest that health impacts – such as poor birth outcomes and respiratory symptoms – also tend to be more prevalent near oil and gas development than further away and compared with controls. In a peer-reviewed study that I published with my colleagues, we found that 17.6 million Americans live within 1 mile of an active oil and/or gas well (Czolowski et al., 2017).

While it is true that there are still some unanswered questions regarding the exact mechanisms of health impacts of oil and gas development and climate change, there is clearly enough evidence for decisionmakers to take the following actions:

- # 1: Immediately re-implement the cost-effective approaches to methane and health-damaging VOC emission control as was required under the now rescinded 2016 BLM Methane Rule.

- # 2: Implement increased minimum distances between where oil and gas development occurs and where people live, work, recreate and play to protect public health.

This testimony has been provided to inform the Subcommittee of the need for increased regulation of oil and gas development at the federal and state levels, including on public lands.

Again, I wish to thank members of the Subcommittee for the opportunity to speak on the issue of the human health dimensions of oil and gas development and climate change.