

**U.S. House of Representatives**  
**Committee on Natural Resources**  
**Washington, DC 20515**

January 25, 2022

Dr. Kristina Dahl  
Senior Climate Scientist  
Union of Concerned Scientists  
Cambridge, MA

Dear Dr. Dahl,

I am writing to thank you for appearing before the Subcommittee on Energy and Mineral Resources at the oversight hearing on Thursday, January 20th, 2022 to present testimony on, "*What More Gulf of Mexico Oil and Gas Leasing Means for Achieving U.S. Climate Targets.*"

Your testimony was helpful in defining the Committee's understanding of the issue. We appreciate your time and insight and are grateful for your contribution to the Committee's work.

While many questions were asked during the hearing, the Subcommittee has additional questions, attached, for your reply. Please provide your written responses to: Charles Olsen, Subcommittee Clerk, no later than Thursday, February 3<sup>rd</sup>. Committee Rule 3(o) requires that responses be submitted within 10 business days of the hearing.

If you have any questions, please feel free to contact Charles Olsen, Policy Aide, at [Charles.Olsen@mail.house.gov](mailto:Charles.Olsen@mail.house.gov). Thank you for your important contribution to the Committee's work.

Sincerely,



Alan S. Lowenthal  
Chair  
Subcommittee on  
Energy and Mineral Resources

Enclosures: Questions for the Record

## Questions for the Record by Democrat Members

### Questions from Rep. Huffman for Dr. Kristina Dahl; senior climate scientist, Union of Concerned Scientists:

1. Dr. Dahl, in 2020, researchers at the University of Michigan found that oil and gas platforms in the Gulf of Mexico have a 2.9 percent natural gas loss rate, meaning platforms were leaking twice as much methane as the EPA estimates. According to the researchers, this is because of undercounting offshore platforms, higher emissions from shallow-water facilities, and a small number of sporadic super-emitting incidents. Can you speak to the human health and climate impacts of methane emissions?

February 3, 2022  
Representative Jared Huffman  
1527 Longworth House Office Building  
Washington, DC 20515

Dear Representative Huffman,

Thank you for reaching out to me with your question about the human health and climate impacts of methane emissions following the January 20, 2022, hearing on oil and gas leasing in the Gulf of Mexico. I hope the response I provide below is helpful but would be happy to follow up with you or your staff if you have additional questions relating to the impacts of greenhouse gas emissions or climate change.

Methane is the primary component of natural gas and methane emissions have important implications for our climate and for human health. While methane is much less abundant than CO<sub>2</sub> in our atmosphere, it's a much more potent heat-trapping gas. Methane emissions to date are responsible for about 30% of the warming we've experienced over the last 150 years. That said, the lifetime of methane in the atmosphere is relatively short—about 10 years. After that point, most emitted methane will have broken down to form water and CO<sub>2</sub>, which will continue warming the planet for hundreds of years.

The more we learn about methane and its impacts on our climate, the worse the picture is and the higher the emissions are than we have previously understood. Moreover, EPA estimates are likely significantly undercounting methane emissions from the oil and gas sector. With this in mind, it is critically important to fully consider the implications of oil and gas extraction on methane emissions.

While the bigger beast to tackle is our long-term CO<sub>2</sub> emissions, reducing methane emissions here and now could help us to reach our 2030 climate goals. Notably and intuitively, oil and gas operations account for more than a quarter of all methane emissions, so as we pursue reductions in fossil fuel production and use, we would expect methane emissions to decline as well.

Because methane emissions contribute to the overall warming of our planet, they influence human health. Rising temperatures are associated with more frequent, more intense heatwaves; stronger hurricanes; larger wildfires; more frequent floods; and less predictability in our water systems. Each of these climate impacts poses a risk to our health, with the risks expected to grow as we continue to alter our climate.

Methane also has indirect impacts on our health because it is a precursor formation of ground-level ozone, which can cause respiratory problems, damage our airways, and worsen

asthma and other lung diseases. Children, older adults, and people who work outdoors are particularly at risk. Methane is also often released along with a host of other toxic chemicals, like hydrogen sulfide, benzene, and formaldehyde. These pollutants increase the risks of cancer, immune system problems, neurological and reproductive issues, and other health problems.

Thank you again for your question and for your service to our shared home state of California.

Best regards,

A handwritten signature in black ink, appearing to read 'KDahl', with a stylized flourish at the end.

Kristina Dahl, PhD (kdahl@ucsusa.org)