

Members of the House Committee on Energy and the Environment,

I support House Bill 2479, which modifies the definition of “global warming” to include certain aerosol contaminants, including black carbon.

Black carbon, a major constituent of soot, is an important contributor to global warming because it is very effective at absorbing light and heating its surroundings. It can absorb one million times more energy than an equal amount of carbon dioxide (1). Black carbon “is estimated to be the second most important human emission in terms of its climate forcing in the present-day atmosphere; only carbon dioxide is estimated to have a greater forcing” (2).

Reduction of short-lived pollutants (black carbon, methane, hydrofluorocarbons) is one of the 6 critical areas that humanity needs to address according to over 1100 scientists who signed the 2019 World Scientists' Warning of Climate Emergency document. “We need to promptly reduce the emissions of short-lived climate pollutants, including methane, black carbon (soot), and hydrofluorocarbons (HFCs). Doing this could slow climate feedback loops and potentially reduce the short-term warming trend by more than 50% over the next few decades while saving millions of lives and increasing crop yields due to reduced air pollution (3).

1. Cho, R. (2016) The Damaging Effects of Black Carbon Earth Institute, Columbia University

<https://blogs.ei.columbia.edu/2016/03/22/the-damaging-effects-of-black-carbon/>

2. Bond, T.C. et al. (2013) Bounding the role of black carbon in the climate system: A scientific assessment. JGR Atmosphere,

<https://doi.org/10.1002/jgrd.50171>

3. Ripple, William J. et al. (2019), World Scientists' Warning of a Climate Emergency. BioScience,

<https://academic.oup.com/bioscience/article/70/1/8/5610806>