

March 1, 2021

Chair Marsh and Committee Members  
House Committee on Energy and Environment

**RE: HB 2479**

Dear Chair Marsh and Committee Members:

On behalf of individuals and organizations representing thousands of members, we write to express our support for HB 2479, which amends the definition of greenhouse gases to explicitly include black carbon among climate forcers to be considered when setting climate policy in Oregon. The bill directs the Department of Environmental Quality (DEQ) to incorporate estimations of black carbon, data which is already a subset of pollution data already collected but not broken out, into greenhouse gas inventories. It would also direct DEQ to consider and make recommendations for black carbon reduction strategies that can be incorporated alongside current climate mitigation efforts.

The state of Oregon adopted a goal in 2007 to reduce carbon dioxide and other greenhouse gases to 10 percent lower than 1990 levels by 2020 with further reductions to continue through 2050. The Oregon Global Warming Commission acknowledges that even with current and planned aggressive and targeted strategies, the state is very likely to not achieve these reduction goals.

Oregon is already in a climate emergency, and at least 1886 jurisdictions in 34 countries representing more than 826 million people have declared a climate emergency. Increasing concentrations of climate forcing gases like carbon dioxide will lead to abrupt and extraordinary changes in temperature. Keeping expected temperature increases below 2° C by 2050 according to the United Nations Environmental Program would require tracking and measuring all contributors to climate change- including black carbon. Ignoring black carbon's role in climate is akin to ignoring available science. To take effective action we must first be able to track and measure it in order to effectively manage it.

**What is Black Carbon?**

Black carbon is an aerosol particulate that is a combustion byproduct from carbon-based fuels. It comes from diesel engine exhaust, industrial sources, and combustion of solid fuels like wood. Like carbon dioxide and other greenhouse gases, it also contributes to climate change but has an impact about 2500 times greater than an equivalent amount of carbon dioxide. In the time since Oregon defined greenhouse gases and adopted its climate goals, scientists have identified black carbon as likely the second or third largest human contributor to climate change. Black carbon is also a regional scale pollutant, meaning that localized benefits can be realized from regional actions. Studies have shown black carbon deposition in the Cascades and the Sierra Nevada mountains have accelerated snow melt, altering water availability for farmers, city dwellers, salmon and other aquatic species dependent on water. Black carbon also has significant human health impacts- adversely impacting the

respiratory, cardiovascular and nervous systems in humans. It is the only pollutant at current concentrations in Oregon that simultaneously and seriously impacts both climate and human health directly.

### **Why is Addressing Black Carbon Important?**

Reducing carbon dioxide emissions, by far the leading human contributor to climate change, is critical and necessary in our fight for our future. Including black carbon along with CO<sub>2</sub> reduction efforts, increases the chances global temperatures will not exceed the 2° Celsius goal. One analysis indicates that eliminating all black and organic carbon, including carbon dioxide, would reduce 20-45% of net warming within 3-5 years<sup>1</sup>. The removal of the climate forcing influence from black carbon delivers significant early benefits that are complementary to the necessary and ongoing work to reduce CO<sub>2</sub> emissions.

Support for HB 2479 means that we can continue with critical efforts to address climate change by incorporating scientifically sound, comprehensive and effective strategies that address it. We urge you to work with your colleagues to pass HB 2479.

Sincerely,

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<sup>1</sup> Mark Jacobson, 2002. Control of fossil-fuel particulate black carbon and organic matter, possibly the most effective method of slowing global warming. *Journal of Geophysical Research Atmospheres*. 107, D19, ACH 16-1 to ACH-16-22. <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2001JD001376> Accessed Feb 18, 2021.

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