

Oregon Thoracic Society Testimony in Support of HB2479

Thank you for the opportunity to submit testimony to this committee. Please see end of document for scientific references.

There is often a false choice presented between having a strong economy and polluting the air. Healthy economies are made of healthy people; we can't have healthy people without healthy air. The COVID 19 pandemic has shown us this. 17% of deaths from COVID-19 comes from its interaction with air pollution, of which black carbon is a core component. At the time of this hearing, over 500,000 people in the US have died from COVID-19, which means over 85,000 of those deaths may be due to this interaction with air pollution.

Black carbon often forms the core of a particularly deadly form of particulate matter called PM 2.5, carrying combustion particles deep into the lung, where they cross into the bloodstream and circulate throughout the body causing disease in nearly every organ and from womb to tomb. In fact, black carbon often tracks more precisely than other measures with the deadly health effects of air pollution, and measuring it, and eventually mitigating it, are important to save health and lives. Pregnant women exposed to this pollution have premature deliveries and give birth to children who are smaller for age. Multiple studies have shown that exposure to black carbon stunts the growth of a child's lungs and increases the risk of developing asthma. One study has even evaluated healthy children from non-smoking homes and measured the black carbon in the cells they coughed up, and found that as the black carbon in their lungs increased, their lung function decreased. The black carbon in their lungs was directly related to the air pollution where they lived. The damage does not stop in childhood, because we are all vulnerable to the air we breathe. This tiny particulate matter can circulate all around the body and it causes damage everywhere in the body- including heart attacks, strokes, and lung disease, as well as decreased brain function, worsened vocabulary and cognitive performance, as well as associations with dementia in the elderly.

It is important for lawmakers to consider how much it costs those who suffer from these diseases in terms of scholastic performance, lost job opportunity, lost life, and lost time with family. How much does it cost their employer, who loses out on productivity? How much does it cost all of us in terms of health care expenditures from medications, doctor visits, and hospitalizations?

The climate effects of black carbon also cause disease. The American Thoracic Society and multiple other professional organizations have found that climate change drives respiratory disease onset and progression, from air pollution to worsening wildfires and longer and more intense pollen seasons, not to mention the increased critical care burden from pandemics and extreme heat events.

The American Lung Association has joined multiple other health organizations including the American Academy of Pediatrics, the American College of Physicians, the Allergy and Asthma network and more to focus on addressing short term climate pollutants and specifically anthropogenic black carbon. Measuring black carbon will help us diagnose where we need to focus to save lives. The American Thoracic Society, of which the Oregon Thoracic Society is the state chapter, has called for public monitoring and alert systems for air pollution threats, such as the system proposed with this bill.

We need to take responsibility as a state to find where the risk is from both an immediate health risk and climate risk standpoint, so we can start to address the problem. We need this bill as an important first

step to diagnose our black carbon problem in the state of Oregon, so that we can work towards addressing it where it is most needed and reap the benefits in terms of healthier children, healthier communities, and healthier economies. There are no healthy economies without healthy air.

Thank you for your time and your service to our State.

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