

March 18, 2013

Senator Dingfelder, Chair
Senator Olsen, Vice Chair
Senator Bates
Senator Hansell
Senator Hass

RE: Oregon Clean Fuels Program, Senate Bill 488

Dear Members of the Senate Environment & Natural Resources Committee,

We, the undersigned, are deeply concerned about the air pollution and greenhouse gas emissions associated with burning petroleum fuels and write you today to urge you to lift the sunset on the Oregon Clean Fuels Program.

Health Impacts of Air Pollution

Criteria air pollutants—including ground-level ozone, particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide and lead—adversely affect lung health and are associated with increased hospitalization and mortality due to cardiovascular disease. In addition, numerous air toxics—such as diesel soot, benzene, polycyclic aromatic hydrocarbons, and metals including manganese and nickel—are known or suspected to cause cancer and other serious health problems.

Although Oregon turned the tide on the bad air of the 1970s and 1980s, in many parts of the state, our air is still not as clean as it should be. Oregonians are exposed to a number of air toxics at harmful levels, and parts of the state struggle to meet the national air quality standards for criteria air pollutants.

Oregon adults have a higher burden of asthma (both lifetime and current) than in the overall U.S. According to a 2002 study in *Environmental Health Perspectives*, about 10-35 percent of asthma attacks can be attributed to outdoor air pollution such as car exhaust and industrial emissions. And a 2009 study in the *American Academy of Pediatrics* found that living close to a major road is associated with a 1.5-fold increased risk of asthma.

To protect Oregonians' hearts and lungs, we must tackle all sources of air pollution, including traffic exhaust.

Health Impacts of Climate Change

The climate affects just about everything in our lives—including such important health indicators as our ability to grow food, our ability to keep infectious diseases and pests at bay, and our ability to ensure quality drinking water. The reality is

that we're putting too much carbon into the atmosphere by burning fossil fuels, and this excess carbon is changing our climate. We are already beginning to see the results in significant, rapid changes in overall weather patterns—including heat waves, droughts, floods, and deadly storms. 2012 was the warmest year ever recorded in the continental U.S. NOAA says the odds of this heat wave being a random event—rather than part of a global warming trend—are about 1 in 1.6 million.

In 2009, the Climate Leadership Initiative Institute for a Sustainable Environment at the University of Oregon teamed with the Environmental Health Committee of the Oregon Coalition of Local Health Officials to produce a report, *Climate Change Health Preparedness in Oregon*, which details the public health risks associated with climate change in Oregon (see an excerpt from that report below). Since health officials first sounded the alarm, the evidence that climate change is bad for our health has only grown stronger and new threats have emerged. For example:

- The National Institute of Environmental Health Sciences at the National Institutes of Health points out that extreme cold and extreme heat directly affect the incidence of hospital admissions for chest pain, stroke, cardiac dysrhythmia (irregular heart beat), and other cardiovascular diseases.
- A 2008 study published in *Environmental Health News* found that mercury levels at ground level are increased by more than 30 percent in environments where carbon dioxide is also increased. Elevated carbon dioxide levels most likely cause changes in the soil chemistry that increase its ability to retain or store mercury.

The Clean Fuels Program Will Help Protect People's Health

The Clean Fuels Program requires Oregon fuel producers and importers to gradually lower greenhouse gas emissions of transportation fuels 10 percent over a 10-year period. This is an important component of the state's overall strategy to get its greenhouse gas emissions in check and to meet Oregon's scientifically based greenhouse gas reduction goals for 2020 and 2050.

The lower-carbon fuels that will be blended into Oregon's fuel mix also produce less air pollution. For example:

- The tailpipe emissions of electric cars are completely clean, and looking upstream to where Oregon's electricity is generated, electric cars remain clear winners; however, we do support increased efforts to reduce Oregon's reliance on coal and other polluting energy sources so that the lifecycle emissions of electric cars are further reduced.

- When biodiesel is blended with petroleum diesel, both the mass and toxicity of diesel particulate matter is reduced. Emissions of particulate matter, carbon monoxide, volatile organic compounds, and sulfur dioxide—as well as the air toxics benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and diesel particulate matter—are all reduced. Some studies suggest an increase in nitrogen oxide emissions (an ozone precursor), but new engine technologies have made adjustments to negate this effect.
- Ethanol reduces many pollutants (including particulate matter, sulfur dioxide, unburned hydrocarbons, benzene, 1,3 butadiene, polycyclic aromatic hydrocarbons, toluene and zylene) and has been used for many years to tackle carbon monoxide pollution in particular. Ethanol can increase smog precursors; however DEQ has estimated that increased use of ethanol will not lead to a significant increase in ozone formation.

We Urge You to Pass SB 488

We appreciate your concern for the health of Oregonians and urge you lift the sunset on the Oregon Clean Fuels Program.

Sincerely,

Beyond Toxics

Lisa Arkin

Northwest District Association Air Quality Committee, Portland

Sharon Genasci

Oregon Public Health Association

Josie Henderson

Physicians for Social Responsibility, Oregon Chapter

Susan Katz, MD

Upstream Public Health

Mel Rader, MS

Andy Harris, MD

Bonnie Nedrow, ND

Jenny Pompilio MD, MPH

Maye Thompson, RN, PhD

*Excerpt from **Climate Change Health Preparedness in Oregon**, a 2009 joint report by the Climate Leadership Initiative Institute for a Sustainable Environment at the University of Oregon teamed and the Oregon Coalition of Local Health Officials, Environmental Health Committee.*

Find the report at:

<http://www.theresourceinnovationgroup.org/storage/ORPHSurveyReportFinal.pdf>

excerpted from pages 3-4 of the report:

Public Health Risks Associated with Climate Change in Oregon

Researchers have predicted the potential health risks that result from climate change and those most likely to impact the western part of the United States. Given the predicted climatic changes based on downscaling global models, the following is a list of health risks expected to occur in Oregon:

- Increase of heat stroke, heat exhaustion and heat cramps from warming (PSR, 2002);
- Higher rates of skin cancer (already documented in a report from Kaiser Permanente [Glass & Hoover, 1989]), eye damage and disease from UV and radiation exposure (Longstreth, 1991);
- Rising outbreaks of diseases from flooding due to the combination of storm water and sewage in Oregon (McGeehin, 2008);
- Impacts on mental health and increased stress from displacement due to extreme weather events and general dealings with climate change (Longstreth, 1991);
- Reduced ability to transport medical supplies from damage to roads from flooding (Longstreth, 1991);
- Increase in vector-borne disease such as Lyme disease and West Nile Virus, from insects that have access to more breeding grounds from flooding and warming (WHO, 2005; PSR, 2002);
- Higher rates of asthma and other respiratory diseases from ground level ozone, increased allergens, degraded air quality, and increased wildfires (WHO, 2005; PSR, 2002);
- Increased rates of allergies from changes in production, distribution, dispersion and allergen content of aeroallergens and the growth and distribution of organisms that produce them (EPA, 2008);
- Disease outbreak from contamination of water by bacteria (*e.g. Salmonella, Shigella*), viruses (*e.g. rotavirus*), and protozoa (*e.g. Giardia lamblia, amoebas, Cryptosporidium, and Cyclospora*) (PSR, 2002);
- Poisonings from increased exposure to mercury in fish and water, red tides and

seafood toxicity as well as higher exposure to pesticides (high use of pesticides on crops are expected to combat greater insect numbers) (PSR, 2002);

- Reduced agricultural output from droughts or contamination from flooding, leading to an increase in imported food, which could bring additional diseases and reduce nutritional value of food (CCSP, 2008); and
- Crowding, higher rates of communicable disease spread, and increased pollution in urban areas as a result of climate refugees fleeing areas affected by sea level rising and other displacement events (WHO, 2005).

All Oregonians will be at risk from these climate change related health risks, however the type and degree of risk will be dependent on individual and community demographics. Populations that are particularly vulnerable to climate change related health risks include:

- Individuals with impaired immune systems;
- Lower income individuals and communities;
- Rural communities that may be in areas more prone to temperature change, wildfire or disease outbreak and with less access to health care; and
- Children, pregnant women, and the elderly, predicted to be 20% of Oregon's population by 2020 (Oregon Parks and Recreation, 2008), and who may be more susceptible to health risks.