

To: Senator Michael Dembrow, Representative Karin Power, and Members of the Joint Committee on Carbon Reduction.

**RE: Testimony on HB 2020, Clean Energy Jobs Bill
February 15, 2019**

Oregon urgently needs to act to address the climate crisis. I heartily applaud our willingness to put a declining cap on all greenhouse gases in Oregon. I encourage you to go even further to 0 GHG in 2050. I believe Oregon can be a model for other states in putting a price on GHG pollution and then investing those monies in ways that will ensure a just transition – one that enables further reductions in climate pollution, promotes clean energy, and reduces harms to disadvantaged communities.

On a personal note I am very worried about the future for my two adult daughters. While my hope is that we can bend the curve and avoid a 2-degree Celsius increase in global temperatures and the catastrophic results that are inevitable if we do exceed that 2-degree increase, I am not optimistic. I would love to be a grandfather someday, but, if my daughters were to ask me the wisdom of bringing a new being into this world, at this point I would counsel them to not have children. The risks are too great that when they became adults that they would be facing an environment that is increasingly inhospitable to a high quality of life for most people. I dearly hope that I am wrong. May this legislation point the way for other states to take the needed actions to prove me wrong.

There are so many harms that result from climate pollution that where to begin is challenging. I will focus on just a couple. With global warming, more precipitation is falling as rain in the Cascades rather than snow. According to the EPA, average annual temperature increases in the Northwest have been about 1.3F over the past 100 years and are projected to increase by 3 – 10F by the end of this century. The result of these changes will be a less reliable supply of water for hydro power and agriculture. We will experience earlier spring snowmelt and summer stream-flows will decline. On a personal note, I love to cross-country ski. My opportunities to ski in the Cascades will inevitably decrease. And the trends are such that when my adult daughters reach my age, they likely will have to drive north into Canada to cross-country ski.

Another harm that result from these changes in snowpack will be on our salmon. Salmon are especially sensitive to changes in stream temperatures. Studies by EPA show that roughly one third of current habitat for salmon and other cold-water species in the Northwest will be too warm for them to tolerate. Of course, salmon also have seasonally timed migrations up our rivers and streams to spawn. With earlier and higher stream-flows that result from climate change comes damage to spawning nests. It is quite magical to watch salmon spawning in near-by streams. We risk losing this icon of the Northwest.

The last harm I will mention is the impact on oysters and our fisheries. Our oceans are becoming more acidic and one of the results here in the Northwest has been the die-off by the billions of oyster larvae – the seawater is so corrosive that it eats away the young oyster shells before they can form. Of the two trillion tons of CO₂ released into the atmosphere over the past 200 years, about a quarter of that has been absorbed by the oceans. The effect of this corrosiveness is akin to osteoporosis, which causes bones to become brittle. With increased acidity shells become thinner, growth slows down and death rates rise. This is and will continue to be a significant challenge to both shellfish harvesters and commercial fisherman, and the nearly \$500 million value that represents here in the Northwest.

I strongly support passage of HB 2020. At the same time, I encourage this bill be strengthened by:

- Minimizing free allowances
- Keeping offsets to no more than 4%, and
- Enumerating specific allocations to the Climate Investment Fund (e.g. 50% to impacted communities, 10% to tribes, 20% to natural and working lands, and 20% statewide) and the Just Transition Fund

Sincerely,

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