To Chair Holvey and members of the House Rules Committee

Testimony on HB 4167 Feb. 21, 2020

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My name is Philip H. Carver. I live just outside Salem (zip code 97306). I am a co-coordinator of the climate justice group 350 Salem OR.

I want to thank all the legislators who have spent countless hours during and between sessions for the past several years to develop legislation to address climate change.

My experience on this issue

I received a Ph. D. in utility and natural resource economics from Johns Hopkins University in 1978. I worked for the Oregon Dept. of Energy and the Oregon Public Utility Commission (PUC) for 37 years. My work focused on actions that reduce greenhouse gas (GHG) emissions. I was staff for several governors' global warming task forces, the NW Power and Conservation Planning Council, internal department working groups and the Oregon Global Warming Commission. I testified on many utility integrated plans, starting in 1989, and many other PUC dockets and rulemakings. I fully retired from state service in 2017.

These remarks elaborate on my oral remarks of Feb. 20 around 8 pm. I address three issues:

- 1. Passage of this bill relates to a genuine emergency
- 2. The role of a small state such as Oregon
- 3. Issues related to a public vote on HB 4167

This is a genuine emergency

HB 4167 is a strong bill that will put us on track to meet Oregon's greenhouse gas reduction targets in the bill. It has many provisions to protect low income and rural communities. We are in a climate emergency. Oregon is already feeling its effects.

Achieving the 2035 GHG emission goal in HB 4167 (a 45 percent reduction from the 1990 Oregon emission level) will be extremely challenging even if this bill passes this session. If this bill does not pass, it will be virtually impossible. Examples of lags between passage and reductions in emissions are shown in motor vehicles and electricity transmission system upgrades.

Even if 45 percent of the cars and light trucks on the road in 2035 are 100 percent electric vehicles (EVs) it will not reduce emissions by 45 percent. At the projected grid power mix for 2035 EVs will emit something like 20 percent of current vehicle emission rates. Given slow vehicle turnover, very low rates of EV purchases currently and a beginning of implementation in 2022 under the bill, 45 percent of stock as EVs by 2035 is very challenging. Note that this is one of the most easily addressed portions of transportation emissions.

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Lags between transmission plans and construction completion are even more challenging. Major upgrades will be needed to get renewable generation (including existing hydro power) to 80 percent of the power mix. For example planning was complete for the Boardman (OR) to Hemmingway (ID) power line in 2008. At that point joint state and federal permitting began. Project sponsors hope to have the power line completed by 2026, 18 years after permitting began.

Recent scientific research indicates that even if the world achieves the 2035 goal in HB 4167, it may not avoid feedback effects that could effectively remove human control over GHG levels in the atmosphere.

The role of a small state such as Oregon

Of course, if other states and countries take no action then reduction in Oregon emissions will have very little impact on **global** warming.

The key point is that action by Oregon and other states to make up for the lack of U.S. participation in the Paris Climate Accord is essential. It will give political support for other countries to meet their emission goals. All other countries are participating in the Accord and have GHG goals. Actions by U.S. states may be essential in keeping the world on track to meet necessary emission goals. The possibility of failing to meet these worldwide goals constitutes a genuine emergency.

For a collective issue, such a pollution or littering, collective action is necessary. Paraphrasing Emanuel Kant, we must ask "What if everybody did (or didn't) do it." Even if other people litter, that is no excuse for us to litter.

Emissions by other states and countries contribute to the huge problems Oregon is seeing. Similarly, Oregon's emissions contribute to other's problems. Yet Oregon's per capita are larger than most other counties. For comparable statistics U.S. per capita carbon dioxide emissions from fossil fuel burning and cement manufacture are used below.¹

U.S. per capita emissions are twice China's 2018 level and eight times the level in India.

U.S. emissions are about 27 times the level of Bangladesh. It is one of the countries that is most threatened by sea level rise, one of most firmly predicted effects of the climate emergency. Most African countries report per capita levels similar to Bangladesh.

¹ https://en.wikipedia.org/wiki/List of countries by carbon dioxide emissions per capita reports the following metric tons of CO2 per capita from fossil fuel burning a cement manufacturing for 2018: U.S. 16.1, China 8.0, India 1.9 and Bangladesh 0.6. Many African countries reported levels similar to or below the level of Bangladesh. Based on https://en.wikipedia.org/wiki/List of U.S. states and territories by carbon dioxide emissions Oregon's per capita emissions in 2016 were 58 percent of U.S levels. This is largely because most of the coal plants that serve Oregon power customers are located outside the state and are not counted in US EIA statistics. Oregon's consumption patterns are not different from average U.S. patterns. Emissions calculated by the Oregon Dept. of Environmental Quality are similar to the U.S. average.

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It is immoral for Oregon to argue that its emissions don't matter that much. Each ton emitted by Oregon has the same effect as any other ton. As our per capita emissions are higher than all but a few countries we must do our share to protect the climate. Polluting industries everywhere must be held accountable.

Issues related to a public vote on HB 4167

After more than six years of effort to craft a carbon pricing bill,² HB 4167 has many complex mechanisms to protect affected communities and to help ensure effectiveness. As introduced it is 92 pages long. This is not the kind of bill that should be submitted to voters. If a carbon pricing proposal were to be submitted to voters it should be similar to the AB 32, the California bill that established their cap and trade system (a.k.a. the Western Climate Initiative). That bill passed the California Legislature in 2006. It is about 12 pages long.

The bill established the GHG emission limits for California and has the CA Air Resource Board (CARB) establish rules to meet those limits. It has some specifics, such as the requirements for offsets to count within the system. Otherwise, broad discretion is left to CARB to keep California emissions under the limits and to administer the carbon allowance system.

Submitting a bill as complex as HB 4167 to voters would be inconsistent with the process as envisioned by the Oregon Constitution. The many complexities could be exploited by unscrupulous advocates for both sides. Voters who have many other responsibilities cannot be expected to sort out a 92 page proposal. Further, a 9 month delay in a emergency situation is untenable.

Thank you for the opportunity to testify.

² https://www.pdx.edu/dmss/news/detailed-carbon-tax-report-shows-potential-significant-emissions-reductions-oregon . Full report at https://www.pdx.edu/nerc/sites/www.pdx.edu/nerc/sites/www.pdx.edu.nerc/files/carbontax2014.pdf