Testimony in Support of HB 3152 Philip H. Carver, Ph.D.<sup>1</sup> On behalf of 350 Salem Oregon<sup>2</sup> Feb. 27, 2023

To Chair Marsh, Co-chairs, Committee members and staff

350 Salem OR strongly supports HB 3152. It is a practical and economic solution to the problem of fuel choice, particularly in the residential sector.

As part of my work for the Oregon Dept. of Energy I did extensive work on residential fuel choice between natural gas and electricity. During that time I testified before the Public Utility Commission on this issue.

Before the climate emergency was apparent, it made good sense to let retail prices and consumer preference guide fuel choice. Because of the need to reduce climate pollution as fast as possible, that policy no longer makes sense. Consumers do not pay for the damages that their climate pollution causes. If the full costs were included in the price, their cost of fossil fuels would more than double.

I have followed the proceedings of the Commission on the fuel choice issue for the nearly three years since Gov. Brown's Order 20-04. The Commission responses have been too weak to address this urgent issue.

To meet the State's goals on greenhouse gas (GHG) emissions, no economically viable actions can be ignored. There will need to be serious programs to convert existing gas heated houses to ones with electric heat pumps. The low GHG technologies are all on the electric side.

There are gas heat pumps, but they are much less efficient than the electric ones. Also, unlike electricity, there are no economically viable renewable energy sources to replace fossil methane ("natural gas").<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> My Ph.D. is in Natural Resource and Utility Economics from Johns Hopkins University. From 1980 to 2017 I worked for the Oregon Dept. of Energy and Public Utility Commission mostly as a senior energy policy analyst.

<sup>&</sup>lt;sup>2</sup> 350 Salem OR is a chapter of 350.org, an international non-profit dedicated to reducing climate pollution and human-caused climate disruptions, such as the 2020 Labor Day Santiam Canyon wildfire, the June 2021 heat dome event and the 2023 "fir-magedon" dieoff of true fir trees in central and eastern Oregon.

<sup>&</sup>lt;sup>3</sup> There are ways to convert biological materials to methane, but there are very limited sources for such feedstocks. There will be serious competition for these feedstocks from suppliers of renewable diesel and jet fuel that will make renewable methane unaffordable. Converting long-distance trucks, passenger jets and natural gas supplies to renewable hydrogen is far too expensive to be practical. Electric batteries for long-distance trucks and passenger jets are not yet practical.

One of the most egregious current policies of the Commission is to have existing gas customers subsidize the extension of gas pipes to new homes. This subsidy increases the number of natural gas homes, increasing the cost of future state or federal programs to convert these homes to electric heat pumps. Also, conversion is more expensive than building the home with electric appliances and heating in the first place. Every new gas heated house makes the climate problem more difficult to solve. This bill does not ban new natural gas houses. Instead, it removes an inappropriate subsidy and has the Commission appropriately address the climate emergency.

Legislation to ban these subsidies by 2026 gives more than enough time for the home building industry to prepare to build efficient all-electric homes. Heat pump electric homes cost roughly the same as gas houses with air conditioning and cost less to operate. I just replaced my gas stove with an electric induction stove. It works better than my old gas stove top and doesn't cause indoor air pollution. New all-electric homes will sell just fine.

Any delay in having most new homes be all-electric would increase GHG emissions in the short term and make meeting the state GHG emission reduction goals much more expensive.