

Submitter: John Perona

On Behalf Of:

Committee: House Committee On Climate, Energy, and Environment

Measure, Appointment or Topic: HB3477

Thank you for the opportunity to submit testimony for HB 3477. I write in SUPPORT of the bill.

I am Professor (emeritus) of Chemistry at Portland State University and author of the climate change science/policy text for laypersons titled From Knowledge to Power, which has been widely circulated in Oregon.

I support this bill because it updates Oregon's targets for greenhouse gas emissions reduction in light of the best available science, and consistent with recommendations made by Oregon's Climate Action Commission (OCAC). It's important for the legislature to support our science-based executive agency processes for addressing climate change, and this bill functions as a timely endorsement of the good work done by those agencies.

I wish to note, though, that the 1.5 degree C target for restraining global warming is no longer possible given the recent worldwide increases in greenhouse gas emissions. We have to view this legislative goal, then, as aspirational and no longer practical. Alternatively, we could view it as a goal to be reached only after it has been exceeded by some amount in the next few decades. We can overshoot 1.5 Celsius of warming (compared to preindustrial conditions) but then regain 1.5 Celsius later by employing atmospheric carbon removal technologies.

I further note that Section 8 of the bill charges OCAC with tracking progress toward net zero emissions goals and net negative emissions goals. Here the bill refers to ORS 468A.205, but that regulation cites only greenhouse gas emissions reduction goals, and not net zero emissions or net negative emissions goals. This requires correction.

The bill also sets targets for net zero emissions by 2050 and for net negative emissions thereafter. It makes mention in Section 8 of the potential for Oregon's forests and other lands to absorb carbon, implying that such natural land management is the approach envisioned by the bill's authors to attain "net zero" and "net negative" emissions goals. However, climate change itself is degrading the ability of the land to absorb carbon, and an abundant research literature attests to the increasing likelihood that natural land management alone will not suffice to reach commonly stated "net zero" or "net negative" goals by circa 2050.

Therefore, although the bill does not say so explicitly, by including this language, and in light of our best science, the bill effectively commits Oregon, as a matter of policy, to support large-scale industrial removal of atmospheric carbon dioxide coupled to durable sequestration in the deep earth or deep oceans. I support this goal, even though it is only implicit here. Oregon should do its part to advance industrial scale carbon capture and sequestration technology.

Thank you very much for the opportunity to submit testimony in SUPPORT of HB 3477.