Submitter: KB Mercer

On Behalf Of: Steering Committee and Membership

Committee: Senate Committee On Energy and Environment

Measure: SB125

Dear Chair Sollman, Vice-Chair Findley and Members of the Committee;
The Metro Climate Action Team (MCAT) is a community of experienced volunteers sponsored by OLCV working to steward significant greenhouse gas reduction policy into law in Oregon. On behalf of the Steering Committee and our over 450 members, we are in full support of Dr. Perona's backing of, and suggestions to improve SB 125. Dr. John Perona is a professor of environmental biochemistry and law at Portland State University and author of the climate book "From Knowledge to Power".
Hydrogen's exceptional versatility in terms of how and where it is produced, and its many end uses have earned it a central place in most envisioned portfolios for decarbonization. However, substantial technical challenges exist in realizing its great promise as an energy carrier. Production of decarbonized hydrogen is presently not cost competitive with hydrogen produced from natural gas (grey hydrogen), and penetration of clean hydrogen into applications where fossil fuels now dominate requires a great deal of new infrastructure development. This bill directly meets the challenge of the moment by investing in demonstration projects that would explore new innovations in production, delivery, storage, and end uses of hydrogen. Dr. Perona does have a few provisos which might be incorporated into amendments. First, demonstration projects that envision innovations in hydrogen production from fossil fuel feedstocks without carbon capture should not be funded. We are interested in hydrogen as an energy carrier precisely because it produces no climate pollution when combusted. It would defeat the purpose of the bill to fund projects where the method for producing the hydrogen itself generates a large amount of climate pollution. Demonstration projects should be welcomed, however, that cover the full range of other production methods coming under the rubrics "green", "blue", and "turquoise". Although some climate advocates wish to restrict looking at any options other than "green", this would be a mistake. We are very early in the game, and it is not possible to know
yet which technologies may or may not reach large-scale commercial viability. The highly respected Energy Futures Initiative, in collaboration with many other groups including the Breakthrough Energy/Work for America Foundation and C2ES, has just published a US hydrogen demand action plan that comprehensively lays out the challenges ahead for all these technologies. See https://energyfuturesinitiative.org/reports/the-u-s-hydrogen-demand-action-plan-2/. In Dr. Perona's judgment, this report makes it plain that picking winners and losers at this early stage would be foolhardy. Dr. Perona's other proviso that might be incorporated into an amendment is that the grant funds should be preferentially awarded to demonstration projects where the hydrogen fuel cells would not compete with battery electric technology. Excellent independent potential for hydrogen fuel

cells exists, for example, in long-haul trucking, aviation, shipping, and heavy industries - all applications where electrification is difficult. In contrast, it would not be a good idea to invest state funds in demonstration projects that envision end uses that would compete with battery electric vehicles - which have a huge lead in cost reduction, market penetration, and infrastructure development. For passenger cars especially, there is certainly no need for a costly hydrogen fueling infrastructure that would be redundant with electricity. Dr. Perona recommends that section 3(a)(F) be removed from the bill and that other sections be added to expand the opportunities to include applications in manufacturing as well as transportation.

MCAT Steering Committee
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