



Dear Chair Sollman, Vice-Chair Findley, and Members Golden, Hayden, and Lieber,

Climate Reality Project, Portland Chapter strongly opposes SB 125 as written.

As written, the bill could fund hydrogen produced from natural gas (methane), which could create more carbon emissions and other pollution than using the methane directly: although a kg of hydrogen produces 2.5 times more energy than a kg of methane,<sup>1</sup> it takes more than 3.7 *kg of methane to produce 1 kg of hydrogen.*<sup>2</sup> Methane- or biomass- generated hydrogen is a costly and unsustainable fuel that competes with zero emission fuels and is therefore unlikely to help Oregon meet its climate goals – unlike hydrogen generated from energy sources that do not emit GHG.

Also as written, the bill could fund hydrogen fuel cell electric light and medium duty vehicles for which battery-electric solutions are available, and twice as efficient as hydrogen fuel cells<sup>3</sup> even if the hydrogen fuel cells were produced with 100% zero emission electricity. The state should not fund unproven and resource-depleting applications for hydrogen where existing proven, affordable and zero emission technology can already be used. We see a more urgent need to direct hydrogen research towards hard to decarbonize applications.

The bill should be amended to limit the scope of study for hydrogen generation and applications to be compatible with Oregon's climate goals:

- All funding for hydrogen and hydrogen-related studies, projects, and the like should be limited to green hydrogen generation– defined as hydrogen from solar, wind, and geothermal capacity that is in excess of grid needs.
  - All funding for hydrogen and hydrogen-related studies should be limited to the hardest to decarbonize uses. In transportation, this would potentially include long-haul, heavy duty vehicles and expressly exclude light and medium duty vehicles.
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<sup>1</sup> <https://energypost.eu/hydrogen-is-also-a-greenhouse-gas-so-leaks-must-be-minimised/>

<sup>2</sup> Hydrogen from natural gas: 4.5 normal cubic meters/kg of hydrogen  
<https://www.nrel.gov/docs/fy09osti/42773.pdf>; Natural gas: 1 m<sup>3</sup> = 0,829 kilogram  
<https://www.cbs.nl/en-gb/onze-diensten/methods/definitions/weight-units-energy>

<sup>3</sup> "the battery-operated electric car an efficiency level of between 70 to 80 percent, depending on the model...the hydrogen-powered electric car only achieves an efficiency of between 25 to 35 percent, depending on the model."  
<https://www.volkswagenag.com/en/news/stories/2019/08/hydrogen-or-battery-that-is-the-question.html>

- The bill should recognize limits to scaling green hydrogen, at least in the short term. Green hydrogen is dependent on additional build-out of clean energy infrastructure (for example, development of Oregon's significant offshore wind generation capabilities), but in the near term hydrogen generation should be scaled or time shifted to be compatible with current energy demands on the electric grid.

Thank you for tackling the difficult challenge to write, revise, and pass bills which serve the common good.

*Helena Birecki, legislative committee co-chair and  
Nick Keenan, renewable energy committee chair,*  
Climate Reality Project, Portland Chapter

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#### About The Climate Reality Project

The Climate Reality Project, Portland Chapter is a local, volunteer-led group affiliated with the international non-profit The Climate Reality Project founded by climate leader and former US Vice President Al Gore, whose mission is to catalyze a global solution to the climate crisis by making urgent action a necessity across every sector of society. With a global movement more than 5 million strong and a grassroots network of trained Climate Reality Leader activists, we're spreading the truth about the climate crisis and building popular support for clean energy solutions.

For more information, visit the Portland Chapter at <https://climaterealitypdx.com/>, and the Climate Reality Project at [www.climaterealityproject.org](http://www.climaterealityproject.org) or on Twitter at @ClimateReality.