



# The Climate Reality Project<sup>®</sup>

## PORTLAND CHAPTER

Chair Marsh, Vice-Chairs Emerson Levy and Bobby Levy, and Members Andersen, Helm, Kropf, Osborne, Owens, Pham, and Wallan,

The Portland Chapter of the Climate Reality Project is writing in regard to HB2530. Two points on the production and use of hydrogen are critical:

First, the definition of renewable hydrogen must remain “hydrogen derived from energy sources that do not emit greenhouse gases,”<sup>1</sup> and must explicitly exclude so called “blue hydrogen,” which is hydrogen production from methane (natural gas, biogas, renewable natural gas) combined with carbon capture and storage. “Blue hydrogen” is not clean energy both due to methane leaks from the production and transmission of the methane, and because of the insufficient<sup>2</sup> nature of carbon capture and storage. Although carbon capture and storage projects often target 90%, actual working projects capture less than 60% of direct emissions, and only about 11% of total emissions<sup>3</sup> if you account for the energy used to capture the carbon and upstream emissions. “Blue hydrogen” has additional environmental justice risks, including non-avoidance of health-harming emissions such as nitrogen oxides from pipeline ruptures in already underserved communities<sup>4</sup>.

Second, any incentives for the production of hydrogen should be aligned with meeting electric grid demand with clean energy. The large amounts of energy required to produce hydrogen, whether with clean electricity or with methane, makes it far less efficient than either source used directly. For example, an electric car is about 70-80% efficient, while a hydrogen fuel powered car is only 25-35% efficient.<sup>5</sup>

For this reason the ideal production and use case is: produce hydrogen from grid-connected wind or solar when wind or solar availability is in excess of grid needs, and use it to meet peak

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<sup>1</sup> <https://www.oregon.gov/energy/energy-oregon/Pages/rh2.aspx#>

<sup>2</sup> <https://ieefa.org/resources/carbon-capture-has-long-history-failure>

<sup>3</sup> <https://news.stanford.edu/2019/10/25/study-casts-doubt-carbon-capture/>

<sup>4</sup>

<https://www.desmoinesregister.com/story/money/agriculture/2022/09/11/here-minute-details-2020-mississippi-co-2-pipeline-leak-rupture-denbury-gulf-coast/8015510001/>

<sup>5</sup> <https://www.volkswagenag.com/en/news/stories/2019/08/hydrogen-or-battery--that-is-the-question.html>

winter demand. We also note that green hydrogen may be an option for hard to electrify heavy industrial processes.

Thank you,

Helena Birecki  
Legislative Committee, Co-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://climateralitypdx.com/>, and the Climate Reality Project at [www.climateralityproject.org](http://www.climateralityproject.org) or on Twitter at [@ClimateReality](https://twitter.com/ClimateReality).