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To: House Committee on Energy & Environment

Representative Pam Marsh, Chair

Re: Testimony on HB 3375-1

Relating to floating offshore wind energy - **SUPPORT**

Chair Marsh and members of the committee:

The Renewable Hydrogen Alliance, a trade association of 75+ members based in Oregon, supports your consideration of this important economic stimulus opportunity. In light of today's announcement of a diversified federal infrastructure redevelopment plan, this effort to avail ourselves of a vast source of renewable power has particular urgency.

As we know with Oregon's seasonal surpluses of wind power, markets are not well matched with supply. The need for utility-scale storage capacity grows as we strive to achieve our renewable portfolio standard. Several European countries are leading the integration of intermittent generation with clean fuel demand: by producing renewable hydrogen from surplus on and offshore wind power, they are fueling hard-to-decarbonize trucks, buses, trains, ships and industries like steel and fertilizers.

Batteries, pumped hydro, and other conventional storage cost many times more than the renewables themselves to produce the energy, but fuels can be stored in conventional storage (pipelines, depleted gas fields, even storage tanks) and used in conventional power plants to produce the last 10-20 percent of the energy needed to get to a 100 percent clean grid.

[Goldman Sachs has declared hydrogen a 12 trillion dollar industry by 2050](#), [Bank of America puts it at 11 trillion dollars](#). The [European Union has identified 470 billion euros](#) investment by 2050 and is expecting to invest in the neighborhood of 6 billion euros by 2024. Recent studies conclude¹ that the cost of meeting carbon targets without making hydrogen from electricity is far higher than meeting them with it. This is due to the two-edged effect of hydrogen production reducing wasted renewable electricity ("curtailments" due to power capability exceeding demand) and the need for fuels that would otherwise have to come from expensive biofuels.

The opportunity to engage Oregon state agencies in renewable hydrogen production, distribution, and development will be vital to the state's transition to a resilient economy and to become competitive in a burgeoning global industry.

As the cost of hydrogen production falls, demand for electro-fuels in the Pacific Basin is rising. At least 20 countries -- notably Japan, South Korea, and China -- have instituted public-private partnerships and market incentives to propel the transition. Japan

RHA Mission:
Promote using renewable electricity to produce climate-neutral hydrogen and other energy-intensive products that reduce dependence on fossil fuels.

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invested about \$560 million in hydrogen funding in 2019. They planned to power the Tokyo 2020 Olympics largely on hydrogen. It released its strategic framework to create a “hydrogen-based society” in 2017, according to the Hydrogen Council’s plan, “[Hydrogen: Scaling Up.](#)” Japan plans to [invest \\$19 billion](#) to make hydrogen viable as a fuel to generate electricity. China has initiated more than \$17 billion in their hydrogen transport industry through 2023, according to a recent [McKinsey and Co. road map](#) for a US hydrogen economy.

With proper planning, enabling production of renewable hydrogen on a significant scale would assist Oregon in achieving its greenhouse gas reduction targets as well as local decarbonization plans. Particularly in transportation sectors such as long and short-haul trucking, buses, and heavy-duty off road vehicles hydrogen fuel can propel our timeline for meeting those targets.

Oregon is strategically positioned and endowed with a diversity of renewable resources to supply other countries with clean fuels. We urge you to take a long-term view in considering the manifold pathways that effectively planning for potential use of renewable hydrogen would bring for Oregon’s future and support passage of this timely bill and adoption of the -1 amendment.

Thank you.

Kris Nelson
Chair, Oregon Policy Subcommittee
Renewable Hydrogen Alliance

¹ See [Gas for Climate](#) that concludes the EU will save an annual 138 billion euros in meeting climate goals by deploying renewable hydrogen and biogas, and *System-level power-to-gas energy storage for high penetrations of variable renewables*, Lyseng, et al, International Journal of Hydrogen Energy, Vol. 4, #4, Jan 2018.