



May 8, 2020

RenewableH2.org

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To: Washington Utilities and Transportation Commission  
621 Woodland Square Loop SE  
Lacey, WA 98503

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**STATE OF WASH.  
UTIL. & TRANSP. COMMISSION**

**RE: Avista’s Transportation Electrification Plan**

Dear Commissioners:

The Renewable Hydrogen Alliance (RHA) appreciates this opportunity to provide comments on Avista’s Draft Transportation Electrification (TE) plan.

**Renewable Hydrogen Alliance**

RHA is a non-profit 501(c)(6) organization based in Portland, Oregon. Our mission is to advocate using renewable electricity to produce climate-neutral fuels and industrial feedstocks. We engage in lobbying, promotion, and education about the critical role climate-neutral fuels from renewable power have to play in reaching climate goals and reducing dependence on fossil fuels.

Our membership represents gas and electric utilities, clean energy advocacy organizations, developers, consultants, law firms, and manufacturers of equipment related to the production and consumption of clean fuels including hydrogen fuel cell electric vehicles (FCEVs). [Members of RHA](#) include several NW utilities including Puget Sound Energy, Tacoma Power, Douglas County PUD, Klickitat County PUD, and NW Natural.

**Avista’s Draft Plan**

RHA applauds Washington State’s and Avista’s focus on transportation electrification. Decarbonizing transportation is critical to meeting climate goals; in Washington about 40% of all carbon emissions are due to transportation, roughly half from on-road gasoline vehicles, half from diesel and heavy-duty applications. While battery electric vehicles (BEVs) are good replacements for many gasoline vehicles they are not suitable replacements in all transportation applications, particularly those involving high-duty cycles or greater energy densities—e.g., long haul heavy-duty transportation, marine applications, and aircraft.

Where BEVs are not suitable replacements, an equally important pathway for transportation electrification is producing fuels from electricity, principally

## 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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(but not solely) hydrogen for use in FCEVs. Battery electric vehicles (BEVs) do have important advantages over FCEVs in some applications, but we urge Avista and the Commission to include FCEV electrification in the TE plan.

## Importance of Fuel Cell Vehicles in Transportation Electrification

The absence of power-to-fuels in Avista's draft TE plan does not reflect the current state of development of FCEVs or of hydrogen production from renewable electricity. For example, there are already more than 25,000 hydrogen-powered forklifts in the US, more than 8,000 light-duty FCEVs in California, and about 50 hydrogen transit buses operating in the US. The city of San Bernardino, California, has ordered a hydrogen transit train, and a hydrogen ferry is under construction for San Francisco.

Europe is considerably farther ahead than the US in FCEV deployments. For example, the [United Kingdom plans](#) to change out its entire fleet of 100 diesel transit locomotives for hydrogen, [Switzerland has ordered](#) 1,000 medium-duty hydrogen trucks, and [Denmark is getting 200 hydrogen buses](#).

Closer to home, Douglas County PUD has ordered a 5 MW electrolyzer—the device that produces hydrogen from electricity and water. That facility will produce enough hydrogen to fuel about 40 hydrogen transit buses. Most exciting is that the PUD intends to use the electrolyzer as an interruptible load that will serve as contingency reserve in place of reserves now held on their hydro project. In other words, this new interruptible load will free up 5 MW of capacity on their hydro system.

A key difference between serving BEV electric loads and FCEV loads is that the FCEV load is completely flexible and typically does not coincide with the time of vehicle fueling. This makes electrolyzer loads potentially very attractive interruptible loads for helping integrate renewable resources. Tacoma Power is considering a special rate for interruptible loads, recognizing the value to the utility of having an option to interrupt loads when system conditions or prices make it advantageous to the utility to do so.

Today, several RHA members have plans to build out hydrogen production and fueling stations in the Northwest, including Washington State. Both Toyota and Nikola Motor Company are eagerly looking to expand hydrogen fueling stations into the Northwest from California and British Columbia. RHA also sees special interest among ports, which are under pressure to reduce emissions and have applications for which FCEVs are particularly suitable.



**Conclusion**

We strongly urge that Avista's transportation electrification plan include electrolytic fuels production. These fuels can electrify transportation markets that battery electric vehicles cannot reach with today's technology, and can potentially provide even greater benefits to Washington ratepayers. RHA is dedicated to bringing both renewable hydrogen and hydrogen transportation to the Northwest in the next one to two years. We look forward to seeing FCEVs represented in utility transportation electrification plans and to working with both the WUTC and Avista toward that end.

Sincerely,



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