Docket U-190818

Written Comments submitted by

October 24, 2019

Re: Investigation into Renewable Natural Gas Programmatic Design and Pipeline Safety Standards, Docket U-190818

These comments are submitted in response to the "Notice or Opportunity to Submit Written Comments" published by the Utilities and Transportation Commission on September 30, 2019.

Specifically, the Renewable Hydrogen Alliance (RHA) and Douglas County PUD (Douglas PUD) are responding to Question 4. "How should renewable hydrogen be treated in RNG programs?"

We appreciate the Commission including consideration of renewable hydrogen in this investigation into the RNG Programmatic Design and Pipeline Safety Standards.

Introduction

This docket is opening this investigation pursuant to E3SHB 1257, sections 13 and 14. Included at the end of both sections, after the definition of "Renewable Natural Gas" is the sentence:

> *The commission may approve inclusion of other sources of gas if those sources are produced without consumption of fossil fuels.*

The 2019 Washington Legislature for the first time considered, then included into multiple provisions of Washington law, a definition of renewable hydrogen that meets the test of "*other sources of gas . . . produced without consumption of fossil fuels"* that the Commission may approve. The enacted legislation that included the definition incorporated into statute by the 2019 Legislature is as follows:

ESSB 5588 (RCW 54.04.190) added the "production and distribution of renewable hydrogen" to the legal authorities of Public Utility Districts in the state. The bill added the definition of renewable hydrogen and a definition of renewable resource to include renewable hydrogen into RCW 54.04.190 (5)(b) and (c):

"Renewable hydrogen" means hydrogen produced using renewable resources both as the source for the hydrogen and the source for the energy input into the production process.

"Renewable resource" means: (i) Water; (ii) wind; (iii) solar energy; (iv) geothermal energy; (v) renewable natural gas; (vi) renewable hydrogen; (vii) wave, ocean, or tidal power; (viii) biodiesel fuel that is not derived from crops raised on land cleared from old growth or first growth forests; or (ix) biomass energy.

Subsequently, the Legislature included the same definitions into ESSB 5116 [RCW19.405.020(32) and (34)], Washington's Clean Energy Transformation Act (CETA); in multiple sections in ESSHB 2042, The Green Transportation Act (GTA); and, in ESHB 1160, the Transportation Budget, section 204(2) funded a major study to analyze the costs of BEV and FCEV infrastructure and vehicle deployment.

Through the passage of these various pieces of legislation, the Legislature provided not only the definition of renewable hydrogen, but a broad array of definitions, authorities, investment incentives, alternative compliance pathways, studies, and grant and tax rebate programs for the entire infrastructure for the production and distribution of, (including fueling stations), and - importantly to this investigation - end use markets for, renewable hydrogen.

These provisions include allowing utilities to invest in construction and operation of renewable hydrogen infrastructure as an alternative compliance investment in CETA to achieve emissions reduction, adding hydrogen fueling stations in the WSDOT grant program that previously only included charging stations for battery electric vehicles, and providing equivalent tax rebates for the purchase of new and used battery electric and fuel cell electric vehicles.

Recommendations

We believe adding renewable hydrogen into this U-190818 investigation is consistent with the legislative direction of providing support for developing the entire hydrogen infrastructure relatively simultaneously. Specifically this investigation can support the use of renewable hydrogen in an end use market by developing a tariff for blending renewable hydrogen into natural gas as supported in Sections 13 and 14 of E3SHB1257 as well as in section 16. Section 16 requires the Commission to monitor the greenhouse gas emissions resulting from the blending on NG and RNG. The addition of renewable hydrogen to natural gas meets the test of a *"source of gas produced without the consumption of fossil fuels"* that will reduce the greenhouse gas emissions of conventional natural gas.

We do ask the Commission take note that the Notice of Workshop letter, in item 10 relating to RNG Quality Standards, cites three RNG standard recommendations in the footnotes (1-3) for consideration. None of those standards anticipate any appreciable quantity of hydrogen blending into the produced (bio) gas. Adoption of only these specific standards cited may effectively preclude blending appreciable mixtures of hydrogen into gas pipelines. We believe there needs to be a separate and distinct consideration of standards and guidance for the blending of hydrogen into the natural gas infrastructure, and suggest the formation of a technical work group as recommended below.

We would also like to suggest the Commission also add as a reference, and consider the issues in: "Blending Hydrogen into Natural Gas Pipeline Networks: A Review of Key Issues".

Given the lag time between establishment of state policy and the development of the infrastructure and end use markets, rather than asking the Commission to develop a renewable hydrogen tariff out of this proceeding on a schedule on par with renewable natural gas, we ask

the Commission to establish a Renewable Hydrogen Technical Advisory Group (RHTAG) to research, analyze and develop recommendations for the terms and conditions that would be included in a renewable hydrogen tariff.

Suggested items for review by the RHTAG would include, but not be limited to:

- Hydrogen infrastructure safety, including pipeline injection standards.
- Blending volumes' impact on customer equipment, exiting natural gas infrastructure, and operations.
- Blending volumes as affecting oxidation rates and temperatures.
- Projections on costs, availability, both in time and in volume of renewable hydrogen.
- Greenhouse gas emissions reductions equivalents of displacing conventional natural gas by blending renewable hydrogen.
- Development of a tradeable certificate proportional to the GHG reduction equivalent from displacement of conventional gas by renewable hydrogen.

Suggested members could include:

- Natural Gas utilities
- Renewable Hydrogen Alliance and the technical expertise of its members
- Center for Hydrogen Safety at Pacific Northwest National Laboratory
- Douglas PUD and other potential producers of renewable hydrogen
- Entities with experience in developing compliance markets for GHG reductions

Respectfully Submitted on behalf of the Renewable Hydrogen Alliance and Douglas County Public Utility District.

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