June 3, 2022

To: Kim Herb, JP Batmale, Zachariah Baker and the Oregon Public Utility Commission

From: Arlene Sherrett, Oregon Native and Climate Advocate

Re: Natural Gas Fact-Finding (UM 2178) Draft Report

I thank the Oregon Public Utility Commission for the opportunity to submit comments regarding the fact finding effort on the future of the gas industry in Oregon. As a private citizen who is concerned about climate change, I consider this a rare opportunity to contribute to the community and its future health and prosperity.

It has long been assumed that the use of fossil gas and coal would have to be scaled back as we transition to cleaner, healthier energy resources. The fossil fuel industry has failed to show that its focus is on future realities, instead trying to make plans based on ideas that basically reinforce the status quo while not contributing substantially to GHG reductions that are needed. Perhaps more to the point, the industry has not sketched out any potential plan for their own welfare. They have not, seemingly, tried to answer the question "where do we go from here?"

I want to recognize the PUC Staff's handling of a very difficult situation and compliment them on the amount and variety of material they have summarized. This is all new territory for regulation and there are sometimes no guidelines to rely on. And they've come to a fairly balanced perspective in my view. They have also made it clear adaptations are necessary and that they will be continuing to use their authority to shape gas industry planning.

My submission is an attempt to answer the "where do we go from here?" question. I believe there is an answer that benefits both the gas industry and climate action advocates.

On pages eight and nine of the draft report and in Appendix A, definitions of the scenarios placed before the fossil gas utilities are given. In addition to modeling basic assumptions of business as usual, Alternative scenario 1 high levels of support for innovation and alternative scenario 2 high electrification were modeled to see what the costs, risks and benefits were of these pathways. Here is my suggestion: in addition to what has already been considered in the process, do additional modeling that looks at a hydrogen innovation vector where the focus is producing green hydrogen and making it available to industries that need to decarbonize. Not sticking to the proposed utility plan of merely blending and delivering the proposed 80 gas/20 hydrogen mix via existing pipelines, but producing green hydrogen in what are called hydrogen hubs[1] and delivering only hydrogen, not a fossil gas blend, to industrial customers, ports and other users.

By looking at the graphs on pages iv and v of Appendix A, it seems as though hydrogen innovation is taken by the industry to mean hydrogen blending or HENG. What would happen if green hydrogen production alone was modeled? It would represent a change of trajectory for the industry but I hope PUC and utility representatives would find it worth considering.

Hard to abate emissions from the industrial sector are a major problem that needs solution. The scenario I propose for modeling divorces hard to abate industrial from residential or commercial uses for several reasons. The first is because there is small benefit to residential customers from blending H2 with fossil gas. Electrification and energy efficiency are accessible, cost-effective choices that home and

business owners have for decarbonizing now. There is really no need for blended fuel to heat spaces that are already well cared for. Industry on the other hand has only one pathway for decarbonization and that is hydrogen[2].

Another reason to look at industry and residential/commercial separately is that hydrogen for industry is a different animal than either fossil gas or electricity. There is a timetable benefit in emissions reduction that other energy sources can't match. Whereas electricity use and fossil gas use and associated emissions can be decreased incrementally with existing technology, hydrogen technology represents an opportunity to decarbonize quickly, achieving 2030 CPP compliance and 2050 compliance at the same time. This is because neither producing nor using hydrogen involves carbon emissions. There is no carbon in hydrogen. Green hydrogen installed today means CPP compliance met today.

The last reason for considering green hydrogen production for industry is that green hydrogen as a product will be extremely profitable. The PUC's draft plan does encourage utilities to develop a hydrogen pilot project and take advantage of development incentives. There's plenty of incentive for fossil gas utilities to consider this a worthwhile suggestion. It is estimated that hydrogen will be a several trillion dollar industry.

It looks like no one has stepped up to start producing hydrogen for industrial use in our region , although it would be understandable for something in the Puget Sound/Seattle area to materialize soon. The hydrogen industry is fairly new but H2 hubs have already been built in half a dozen places around the globe, including one planned in the US gulf region[3].

The reality of green hydrogen is on our doorstep. The cost of producing green hydrogen is coming down, with one company reporting having achieved a cost of USD $1.50/kg H2 and being very near market ready[4]. That is on par cost wise with the SMR technology in use in 95% of industrial applications today. That cost estimate is also in the USD $1-2/kg H2 range set out as a target by the Green Hydrogen Catapult[5]. The timing is perfect for the green hydrogen industry to blossom. Someone will eventually step up to kick start this industry. Why not our local utilities and why not now?

Hydrogen can immediately and completely decarbonize hard to abate industries cheaply and profitably. With increasing pressure to decarbonize, it doesn't make sense to wait. If hydrogen innovation is going to be part of utility IRPs, it should be green and it should be used where it will do the most good, in hard to abate areas. It's time to start planning for a healthier tomorrow.

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1 (2021). galway hydrogen hub - Bing. [online] bing.com. Available at: galway hydrogen hub - Bing [Accessed 2 Jun. 2022].

2 Koch Blank, T. and Molloy, P. (2020). (p. 2) Hydrogen's Decarbonization Impact for Industry - RMI. [online] rmi.org. Available at: https://rmi.org/insight/hydrogens-decarbonization-impact-for-industry/

3 St. John, J. (2021). The biggest green hydrogen hub in the US could be… | Canary Media. [online] canarymedia.com. Available at: https://www.canarymedia.com/articles/hydrogen/the-biggest-green-hydrogen-hub-in-the-us-could-be-coming-soon-to-mississippi [Accessed 2 Jun. 2022].

4 Hysata (2022). Hysata's electrolyser breaks efficiency records, enabling world-beating green hydrogen cost | Hysata. [online] hysata.com. Available at: https://hysata.com/news/hysatas-electrolyser-breaks-efficiency-records-enabling-world-beating-green-h ydrogen-cost/ [Accessed 15 May 2022].

5 (2020). Home - Green Hydrogen Catapult. [online] greenh2catapult.com. Available at: https://greenh2catapult.com/ [Accessed 3 Jun. 2022].