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28 May 2022

TO: Chair Decker, Commissioner Tawney, and Commissioner Thompson

CC: JP Batmale, Kim Herb

SUBJECT: Docket UM 1278, The Future of Gas

Physical Characteristics

We regard UM 2178 as embracing the critical issue of our times: how to deal with a transition from reliable but destructive energy sources without undue damage to a stressed economy. Let us begin with the physical properties of methane (CH₄) and the need to manage these properties. We know that compared to CO₂ - a universally recognized climate pollutant - it is 86 times worse for the first 20 years after release. These releases are due to flawed infrastructure (uncapped and leaky wells, compressors – needed every 100 miles, pipelines, tanks, appliances to name a few). Leak detection and repair (LDAR) initiated by industry over 20 years ago is having no effect on the increasing concentration of methane in the environment. Data supplied by the gas and oil industries estimates that 5% of delivered product escapes into the environment. However, new aerial and satellite imagery which expand the scope of leak detection show methane leakage rates that are [even higher](#).

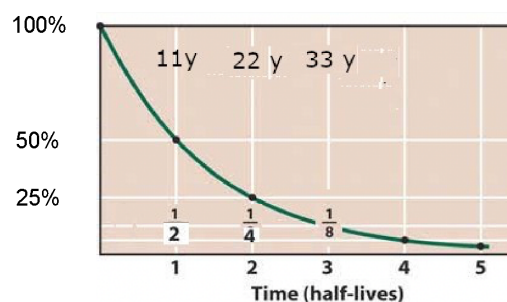
While dependency on fossil and renewable gas continues, infrastructure is in decline, raising questions concerning the increasing cost to the monopoly utilities (they are requesting rate increases borne by rate payers) as compared with renewable energy options that do not rely on physical commodity handling and its problems. In Oregon where a Cascadia Subduction Zone seismic event is a serious concern, we know that buried pipelines for water, gasoline, diesel, and methane gas will rupture. Deadly fuel explosions are expected, and if expansion of fuel infrastructure is allowed it would only increase the likely number of fatalities. The question for the future is, why continue to invest in hazardous infrastructure when safer and more reliable alternatives are experiencing a steady and predictable price decline?

In terms of physical properties, there is significant advantage to curtailing use and therefore the emission of methane. Its deleterious impact causing climate breakdown is reduced 50% after 11 years, due to its known half-life. Methane self-abatement is 3.4% per year if we just stop emitting it, so reducing reliance on gas is one of the most direct and crucial methods to curb short term warming.



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METHANE HALF-LIFE



$$75\%/22\text{years} = 3.4\% \text{ per year}$$

Business alternatives

In order to sustain a healthy economy, consideration must be given to gas utility alternative business models. East Coast utilities have already made the pivot. New Hampshire, Connecticut and Massachusetts utilities [Eversource](#), [National Grid](#) and [Columbia Gas](#) are establishing a market for ground sourced heat pumps capitalizing on gas utility skills and technologies. Their plan involves a community based alternative of [geo-grids](#) with pipelines providing ground-sourced heat pump energy characterized by efficiency performance.

Oregon PUC Messaging

We urge the OPUC not to take at face value that claims asserted by the gas companies are credible. It is critical to your mission of maintaining "safe, reliable, and high quality utility services at just and reasonable rates" to take into account all the evidence including community testimony and reports by other state agencies such as the Oregon Department of Energy. Given the utility's interest in avoiding stranded assets and maximizing profits, it is the duty of you, the regulatory agency, to question the utilities' self-reporting. Otherwise, reporting "oversights" could well result in policy flaws that threaten Oregonians' health, safety, and energy security, and undermine urgent state efforts to reduce greenhouse gas emissions.

Electric heat pumps obviate the need for gas-fed furnaces. Gas heat pumps perpetuate the reliance on methane. OPUC seems to accept the inappropriate claim that gas heat pumps should be encouraged. This is unjustifiable from a public health perspective as there is mounting evidence that all gas appliances worsen indoor air quality and increase risks of asthma and cardiovascular diseases¹. This is additionally unjustifiable in a policy designed to reduce GHG emissions. The only kind of heat pump that the OPUC should be encouraging is an electric heat pump.

¹ <https://www.nejm.org/doi/pdf/10.1056/NEJMp1913663>



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Utility proposals to substitute fossil gas with biogas are poorly conceived because biomethane carries the same problems of leakage and explosion. Oregon's own department of energy warns that biogas can meet only a small portion of Oregon's gas demand, leaving us energy insecure if we fail to shift to clean, efficient, electric solutions."

In section 3.1 the OPUC report states: "These [low-to-zero carbon natural gas technology solutions] range from investments in supply solutions like Renewable Natural Gas (RNG), synthetic natural gas, and hydrogen to demand solutions like gas heat pump water heaters and furnaces."

Interestingly, it was reported by DOE in 2018

(<https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf>) that Oregon does not have the capacity to provide the amount of RNG that the gas companies claim they will incorporate. In fact, according to the Department of Energy's report, the gross potential of renewable natural gas in Oregon is only between 4.6 and 17.5% of current use. There is no possibility of meeting current let alone serving additional gas demand with RNG.

The promotion of the gas heat pump concept by the gas industry represents their attempt to keep society dependent on their product when actually, the evidence indicates that gas use should be reduced and terminated as rapidly as possible. Rather than merely accepting the claims from the gas industry, the OPUC staff should be undertaking a critical assessment of such claims.

Because of the upstream fugitive emissions of methane (discussed above) it is critical that all agencies should incorporate into their planning the reality that methane emissions are 86 times more potent than carbon dioxide on a 20-year basis. Instead of a singular obsession with combustion emissions, OPUC must lead other agencies in full life cycle emissions assessments. It may be that the OPUC acknowledges and incorporates this consideration, but there is no evidence of this in the draft report.

This draft Future of Gas report reflects wide ranging contributions from utilities, all of which make different assumptions about the benefits, availability, and cost of their renewable methane resources. Largely ignored are key questions raised by community stakeholders concerning these claims. Even if the OPUC considers that life cycle assessments of claimed emission benefits is not their responsibility, assessing the impact of the potentially fraudulent interpretations and claims by the gas industry on availability and prices should be taken on as a OPUC due diligence responsibility in a future draft.

It is not encouraging to read ([NGFF Draft Report](#), p 27) that "Currently, the OPUC lacks staffing to implement such regulatory tools as: joint-utility planning, or initiating substantial new investigations, or studies for such important things as beneficial electrification, fuel switching, or a more comprehensive and holistic approach to infrastructure investments ... in an era of rapid decarbonization." As you can see from [Swiss Re](#), the cost of inaction marches on. By their estimate, considering Oregon's GDP of \$270B, if global average temperature increase reaches 3.2 degrees C above 1850 from current 1.1 degrees C, Oregon's annual GDP would be depressed by \$48 billion (18%).



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We therefore urge you, as you finalize this report, to incorporate the robust input from community stakeholders more fully, input that outlines clear, no-regrets, short-term actions the OPUC can and should take to tackle emissions in buildings and throughout fossil fuel infrastructure.

Thank you for your consideration,

William Malloch
Chair
Climate Reality Project, Portland Chapter