

Kim Herb
JP Batmale
Oregon Public Utility Commission
June 23, 2021

RE: Natural Gas Fact Finding 2178

Dear Ms. Herb and Mr. Batmale:

Thank you for opening this investigation into the potential ratepayer impacts from compliance of the gas industry with the Climate Protection Program and the state targets to decarbonize our economy. Given the scope and substance of this docket we believe that several recently released and relevant studies are important for PUC staff, commissioners, gas utilities and stakeholders to be aware of and utilize in this fact-finding work.

1. Electrification of Space Heating

The first study of note is the most recent, thorough and sophisticated of the many studies which demonstrate that electrification of space heating in buildings in this region substantially reduces carbon emissions compared with high efficiency gas furnaces. There have been at least 9 studies to date by universities and independent energy consultants that all reach this conclusion and support electrification as the least cost pathway to decarbonizing buildings. This study is the first to include newly available long run marginal emissions rates for the electricity production that would be needed to respond to increased electric grid loads from electrification of space heating. The research was commissioned by the NRDC and conducted by the [UC Davis Western Cooling Efficiency Center \(WCEC\)](#)¹. Results were released in April 2021. This research included estimated global warming impacts from refrigerant leaks in heat pumps and methane emissions from gas distribution systems and concludes that heat pumps would reduce emissions by 70% to 85% compared to high efficiency gas furnaces in the Pacific region.

Given that representatives of the gas industry frequently make comments, including at the last workshop, casting doubt on the positive impacts of electrification for carbon emissions reductions, it is important that PUC staff are aware of the well documented facts to the contrary. Replacing gas furnaces with heat pumps will have dramatic carbon emissions reductions today, and those reductions will increase as the grid adopts more renewable energy as is mandated by law.

2. Impacts to Gas Ratepayers.

Due to the depth of research concluding that electrification is the least cost method to decarbonize buildings, many research groups are now turning their attention to the difficult question of how to decarbonize our fossil gas systems with the lowest impact to ratepayers, especially those ratepayers in low income communities, renters and others who may be unable to electrify their homes. [Stanford Woods Institute for the Environment](#)² released a white paper in June 2021 which analyzed ratepayer impacts from alternative pathways to decarbonizing buildings in California. The study concluded that the mechanisms which had the highest decarbonization impact and which resulted in the lowest increases to gas rates were: 1. A statewide moratorium on natural gas hookups in all new construction, and 2. Deliberate reductions in the gas distribution system prioritizing segments of the system likely to need

¹ "Greenhouse Gas Emission Forecast for Electrification of Space Heating in Residential Homes in the United States", UC Davis Western Cooling Efficiency Center, April 20, 2021
<https://ucdavis.app.box.com/s/dqja4itdlh1wwicyjh6wag5yswwf97tc>

² "The Costs of Building Decarbonization Policy Proposals for California Natural Gas Ratepayers: Identifying Cost-Effective Paths to a Zero Carbon Building Fleet", Stanford Woods Institute for the Environment, June 2021
https://woods.institute.stanford.edu/system/files/publications/Building_Decarbonization_Policy_CA_Natural_Gas_Ratepayers_Whitepaper.pdf

costly maintenance. Both of these scenarios lead to lower ratepayer impacts than decarbonizing the gas supply through additions of RNG.

3. Decarbonizing Fossil Gas Systems

Another report by [Common Spark Consulting](#)³ commissioned by the Building Decarbonization Coalition further examines the case for strategically decommissioning geographic segments of the gas system to equitably decarbonize buildings in California. This targeted trimming and whole house electrification approach could use the avoided costs from system maintenance to help fund electrification of whole neighborhoods and could be employed to prioritize low income neighborhoods or other areas likely to struggle with voluntary electrification due to the costs of transition.

4. Regulatory Tools for Decarbonizing Fossil Gas Systems

A report from the [Regulatory Assistance Project\(RAP\)](#)⁴ describes tools and processes that are available to regulators to cost effectively manage the inevitable transition away from fossil gas for heating in buildings. The report identifies how existing regulatory mechanisms can be used to create paths to meet customer needs through this transition. Among other recommendations, it highlights the need to understand gas infrastructure costs due to maintenance and safety upgrades and map the system to understand the areas that are most likely to need future costly investments. This mapping will be essential to prudently identify geographic areas of the grid to be trimmed and electrified. The report also highlights energy efficiency and electrification programs that regulators can utilize to remove barriers to cost effective electrification and expand energy efficiency and improve equity.

It is commendable that the Oregon PUC is engaging with this difficult topic of transitioning our gas systems to decarbonize our economy. While we are at the forefront of this work, we are not alone and can learn from the efforts of others and the research being done on this exact topic. We encourage the PUC to embrace this information and incorporate the learnings from these reports into the modelling and regulatory tools exploration in this Fact-Finding docket.

Respectfully,

Brian Stewart
Founder
Electrify Now



³ "The Flipside Report: A White Paper on Targeted Geographic Electrification in California's Gas Transition", Common Spark Consulting, July 2021.

https://www.buildingdecarb.org/uploads/3/0/7/3/30734489/the_flipside_report_-_targeted_electrification_for_gas_transition.pdf

⁴ "Under Pressure: Gas Utility Regulation for a Time of Transition", Regulatory Assistance Project, May 2021.

<https://www.raonline.org/knowledge-center/under-pressure-gas-utility-regulation-for-a-time-of-transition/>