



December 1, 2022

Re: Replacing the University of Oregon’s Polluting Gas Boilers

Interim President Phillips, Chair Ralph and members of the University of Oregon Board,

The undersigned organizations are writing to urge the University of Oregon to take action to meet the goal of climate neutrality as stated in its 2019 updated Climate Action Plan, and to work to rapidly transition the campus off of polluting fossil fuels and to clean, renewable electricity. Specifically, we support the University of Oregon replacing its gas boiler system, which runs on “natural” methane gas, with an all-electric alternative that could take full advantage of the overwhelmingly carbon free electricity provided by the Eugene Water and Electric Board (EWEB).

Methane Gas is a Primary Driver of the Climate Crisis:

Methane is recognized as being about 80 times more potent a greenhouse gas than Carbon Dioxide (CO₂) over a 20-year timeframe, and remains about 30 times more potent than CO₂ over 100 years. The University of Oregon’s Climate Action Plan calls for reducing greenhouse gas (GHG) emissions to achieve carbon neutrality. Yet the University’s most recent 2021 GHG Inventory¹ shows the use of methane gas in buildings accounting for the largest portion of emissions at over 22,000 metric tons of GHG annually and 72.1% of total emissions. According to the Oregon Department of Environmental Quality’s GHG inventory,² the University’s boiler

¹ University of Oregon GHG Inventory, University of Oregon, 2021, <https://sustainability.uoregon.edu/climate.html>

² “Greenhouse Gas Emissions Reported to DEQ,” Oregon Department of Environmental Quality, 2020, <https://www.oregon.gov/deq/ghgp/Pages/GHG-Emissions.aspx>

system is now the single largest source of climate polluting emissions in the City of Eugene. Consequently, and in light of (1) the significant portion of GHG emissions generated by continued use of methane gas in the University of Oregon's buildings; (2) the goals of carbon neutrality reaffirmed in the University's updated Climate Action Plan³; and (3) the targets stated in the City of Eugene's Climate Recovery Ordinance which include the reduction of fossil fuel use in the City by 50% of 2010 levels by 2030,⁴ it is critical that the University transition off of fossil fuel use in its buildings as rapidly as possible.

Methane Gas Harms Public Health:

The need to transition off of polluting methane gas has become a more urgent public health and safety issue, in light of the mounting scientific literature finding that the use of the fuel in buildings is a significant source of harmful air pollutants including nitrogen dioxide.⁵ According to data collected in a 2021 study conducted by the Harvard T.H. Chan School of Public Health,⁶ in Oregon burning fossil fuels in buildings was responsible for 20 premature deaths and \$221,326,511 in health impacts in 2017. 89% of those impacts were from burning gas in buildings.⁷ As is often the case, these health harms disproportionately affect low income and Black, Indigenous and People of Color (BIPOC) communities.⁸ Blending hydrogen and/or biomethane into methane gas is also damaging to public health.⁹

Electrification: a Safe, Affordable and Sustainable Alternative:

In order to meet both the University of Oregon and the City of Eugene's climate goals and to protect residents' public health and safety, it is critical that the University take steps to transition its buildings to run on 100% renewable electricity. Thankfully, due to clean and inexpensive electricity already available from our local publicly owned utility EWEB, electrification will provide

³ "University of Oregon's updated Climate Action Plan," University of Oregon, May 2019, <https://president.uoregon.edu/university-oregons-updated-climate-action-plan>

⁴ "Climate Recovery Ordinance," City of Eugene, 2014, <https://www.eugene-or.gov/3210/Climate-Recovery-Ordinance>

⁵ "Composition, Emissions, and Air Quality Impacts of Hazardous Air Pollutants in Unburned Natural Gas from Residential Stoves in California", American Chemical Society, October 20 2022, <https://pubs.acs.org/doi/full/10.1021/acs.est.2c02581>

⁶ "A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy," Jonathan J Buonocore *et al*, 2021, <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

⁷ These values are based on additional analysis from Jonathan Buonocore, Sc.D, the study's lead author, RMI used median estimates from the results of 3 reduced complexity models used in: Jonathan J Buonocore (Harvard T.H. Chan School of Public Health) *et al*, "A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy", 2021 *Environ. Res. Lett.* 16 054030, <https://doi.org/10.1088/1748-9326/abe74c>

⁸ "Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil & Gas Facilities on African American Communities", National Association for the Advancement of Colored People (NAACP), 2017 <https://naacp.org/resources/fumes-across-fence-line-health-impacts-air-pollution-oil-gas-facilities-african-american>

⁹ "Hydrogen Pipedreams: why burning hydrogen in buildings is bad for climate and health," Physicians for Social Responsibility, June 2022, <https://psr.org/wp-content/uploads/2022/07/hydrogen-pipe-dreams.pdf>

tremendous emissions reductions at a reasonable expense. According to the utility, “about 90% of [our] power comes from carbon-free resources.”¹⁰

The Good Company’s recently-published report on decarbonizing Eugene’s existing buildings (commissioned by the City of Eugene) confirms the benefits of electrifying, at a minimum, space and water heating in the University of Oregon’s buildings. Specifically, the report finds that space and water heating account for the vast majority of the University of Oregon’s GHG emissions,¹¹ and that space and water heating electrification is a cost-effective option for addressing these emissions.¹² Additionally, with the passage of the Inflation Reduction Act (IRA) in Congress, tremendous financial resources are being made available to institutions and local governments to adopt high efficiency electric heating systems such as those being considered at University of Oregon.¹³ Finally, the University of Oregon would not be the first to pursue the decarbonization of its heating systems, but instead would be following the examples set by countless universities including Stanford¹⁴ and Princeton.¹⁵

Concluding Recommendations:

In light of the information presented above, and on behalf of our combined membership, the undersigned organizations **strongly urge the University to:**

- (1) Commit to transitioning its boiler system, and all building functions, off of the use of fossil fuels like methane gas and to electricity by 2025; and
- (2) Work with students, faculty, and community members to identify resources to aid this transition, including but not limited to funding available through the IRA

Thank you for your consideration.

Signed,

Eloise Navarro, Co-Director, UO Climate Justice League

¹⁰ “Where Your Power Comes From,” Eugene Water and Electric Board, <https://www.eweb.org/about-us/power-supply#:~:text=While%20the%20majority%20of%20purchased,State%20Wind%20Farm>

¹¹ “City of Eugene Community Decarbonization by 2045 for Existing Residential, Commercial, and Industrial Buildings Energy Use,” Good Company, October 2022, pp. 7, 61, https://omnetwork.s3-us-west-2.amazonaws.com/sites/134/documents/cc_agenda_packet_10-26-22_ws_post.pdf?naV3w.ERjy.uRjnMRuRI2kKkbo_c0lul

¹² *Id.*, p. 9.

¹³ “Inflation Reduction Act Benefits: Millions Of Efficient Electrified Buildings” Forbes, August 2022, <https://www.forbes.com/sites/energyinnovation/2022/08/30/inflation-reduction-act-benefits-millions-of-efficient-electrified-buildings/?sh=4aa27a5d1346>

¹⁴ “Stanford Central Energy Facility Building,” Affiliated Engineers Inc., <https://aeieng.com/markets/project/stanford-university-stanford-central-energy-facility-building>

¹⁵ “Going deep: Princeton lays the foundation for a ‘net-zero’ campus,” Princeton University, November 2021, <https://www.princeton.edu/news/2021/11/09/going-deep-princeton-lays-foundation-net-zero-campus>

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