

Eugene Green Hydrogen Blending Pilot FAQ

Summary:

NW Natural has submitted an application to begin a hydrogen blending pilot in Eugene to the Oregon Public Utility Commission, and a number of organizations including Beyond Toxics and the NAACP have intervened in opposition to the project. The \$9.8 million project would blend 5-10% hydrogen by volume into Eugene's gas distribution system in the Bethel neighborhood. NWN would build an electrolyzer to produce the hydrogen using electricity and water purchased from the Eugene Water and Electricity Board (EWEB).

Isn't hydrogen good for the climate?

While using hydrogen can slightly reduce emissions, it is not a safe or cost effective strategy. This is especially true when compared to alternatives like electrification. NWN estimates that the proposed project would reduce GHG emissions by 194 tons per year by replacing gas with hydrogen, at the extremely high cost of \$3,000 per metric ton of reduced emissions. The [U.S. Environmental Protection Agency estimates](#) this is equivalent to the annual emissions reductions to removing 49 gasoline-powered cars. A recently published [review](#) of 32 independent studies found that using hydrogen for home heating is [not feasible](#) due to technical barriers, and that this use of hydrogen would be far less efficient and more expensive than electric solutions like heat pumps and district heating.

Is hydrogen blending safe?

Hydrogen is more susceptible to leakage than gas, and can be ignited [more easily](#). A recent study from the United Kingdom found that if hydrogen were used in homes to replace gas, the annual predicted [number of explosions would more than quadruple](#).

What impacts will blending hydrogen have on my health?

Blends of hydrogen and methane increase the emission of nitrogen oxides (NOx) compared to burning methane alone, which will raise the risk of NOx-associated diseases including asthma. These impacts will disproportionately fall on people from disadvantaged backgrounds, who are more likely to live in rented housing with older and inadequately ventilated stoves that result in higher levels of indoor air pollution. Studies show that burning methane alone greatly impacts indoor and outdoor air quality, with children that grow up in a home with a gas range having a 42% greater risk of developing asthmatic symptoms.

The Bethel neighborhood where the pilot would take place is a working class community where over 90% of residents are considered low-income, with a higher percentage of communities of color compared to the rest of the city. Residents live among several polluting factories and

industries which accounted for [96%](#) of all toxic emissions released in the City of Eugene in 2019. Asthma rates in the Bethel School District are [almost double](#) those of other neighborhoods in Eugene.

Can I opt out of the pilot and not receive the hydrogen blend?

No, there is no option to opt out of receiving hydrogen if you live within the project area.

Will I have to pay anything extra for this project?

Yes. If approved, all NW Natural customers across their distribution area in Oregon would see a .2% rate increase to pay for the \$9.8 million project. This would be on top of what is likely to be an unrelated 42% rate increase for gas this winter. A recently published [review](#) of 32 independent studies found that using hydrogen for home heating is [not feasible](#) due to technical barriers, and that this use of hydrogen would be far less efficient and more expensive than electric solutions like heat pumps and district heating.

Is there a better way to reduce emissions associated with the use of methane gas in homes?

Yes. There is a growing push in Eugene and across the country to pass policies to electrify new and existing homes and buildings. A recent analysis from RMI, a non-partisan think tank, demonstrated the significant economic benefits of all-electric residential construction in Oregon, with RMI's Eugene-specific analysis showing that all-electric homes built locally with an Energy Star-rated heat pump cost \$3,446 less to build than a similar mixed fuel home. In addition to these savings, RMI's analysis found that all-electric homes significantly reduce carbon emissions, compared to homes using both methane gas and electricity. Assuming the average emissions factor used by the [Oregon Department of Environmental Quality's Clean Fuels Program for the Eugene Water and Electric Board](#), the analysis found that homes in the region emitted 70% less carbon over a 15-year period than a mixed-fuel home. A separate [report](#) prepared for the Sierra Club by Synapse Energy Economics found that full electrification could yield average annual energy bill savings of \$161 in Portland and \$192 in Bend.

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