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ENVIRONMENT

Beyond Toxics releases report on potential environmental and health impacts of gas stoves



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Beyond Toxics' new report on the impacts of using gas stoves in a home found use of everyday appliances could have unexpected health effects.

The study comes after the Eugene City Council in February passed a recent ban on natural gas infrastructure. The ordinance will prohibit natural gas and other fossil fuel infrastructure in new homes, townhouses and other residential structures no taller than three stories. The measure will appear on a future ballot following a successful referendum petition.

City councilors, who were split 5-3 in the vote, cited concerns about the environment and public health when deciding on the ban.

Beyond Toxics rented a Forward Looking InfraRed camera capable of visualizing pollutants generated by burning methane – also known as natural gas – in appliances. The team used the camera in 13 homes in Eugene and Springfield to capture the exothermic reactions that cook food, and also captured fumes that escaped being burned.

The local environmental nonprofit wants to see more studies done and continue its their research with the new camera technology.

Beyond Toxics tracked three primary air pollutants in the study: nitrogen dioxide (NO₂), volatile organic compounds and hydrocarbons. They turned on one burner on low for one to five minutes and preheated a gas oven for five minutes to 350 degrees, resulting in "harmful" or "hazardous" levels of NO₂.

According to the report, NO₂ can have impacts on the respiratory system. Volatile organic compound is an umbrella term and each compound has a different effect. One of the most

prominent compound is benzene, which is known to cause blood cancer. Hydrocarbons – the most well-known being methane – is a large contributor to climate change. Methane makes up 70% to 95% of natural gas.

The study was done to help provide information about the effects on the environment and general public health, said Lisa Arkin, executive director for Beyond Toxic.

"It's so critical that people in Eugene and, of course, across Oregon, have information that they can rely on, that's based on data, to make their decisions about how they want to regard the issue of gas appliances, and what to do if they have a gas appliance in their home," Arkin said.

What do these findings mean?

A recent study from the Rocky Mountain Institute found 12.7% of childhood asthma could be attributed to gas stoves, primarily because of NO₂'s effect on the respiratory system.

Not all the natural gas released from gas stoves are being burned, said Mason Leavitt, geographic information systems and spatial data coordinator for Beyond Toxic. The camera on high sensitivity mode captured some of the fumes escaping the overhead vent, meaning they were released into the air in homes.

"We found this to be common in a lot of the households that we looked at – the vents didn't successfully pull up a lot of the pollutants emanating from the gas stove," Leavitt said.

Beyond Toxics said several results exceeded the recommended levels of air pollutants from reputable health authorities including the World Health Organization and the National Cancer Institute.

"We just conducted a very limited study, and within that limited context, we already saw several thresholds for public health impacts breached in several capacities," Leavitt said.

The full report can be found on Beyond Toxics website at www.beyondtoxics.org.

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