

Episode 56ER May 29, 2023. The “Bard AI, an Artificial Intelligence Bot, brainstorms indoor residential wood smoke emission particulates pollution” issue.

Residents Against Wood Smoke Emission Particulates (see RAWSEPresidents.wordpress.com and click on the nearest right icon for the latest month, May 2023, of PDFs of articles with U R L's to search on, and on the website to the right are icon links to 30 minute Youtube videos and Spotify podcasts as well as podcasts on Amazon Music Prime (free for Prime subscribers), podcasts.google.com, Cast Box, and Pocket Cast (Pocket Cast is only free on the phone App. Pocket Cast works on Apple phones) and, on the right, icon links to monthly PDFs of articles with URL's to search on, dating back to May 2022.

World

Below is a brainstorm from a machine, using Artificial Intelligence, A I, from Google Bard, which is a free service similar to ChatGPT. The result is okay, it just needs a human to provide the anecdotes that link these suggestions to the human existence of near neighbors of indoor residential wood burners. However, supplying anecdotes of health problems from your neighbor's residential wood burning means that you are a guinea pig, a canary in a coal mine, arguing the facts about something which has already been proved over and over, that the coal mine air is polluting, and the coal mine, (in this case, wood smoke, and wood smoke has higher levels of PM2.5 and CO2 than coal burning), you, a human being, are arguing that the wood smoke will kill you, the canary. And Bard does not mention proactive steps for humans to take such as passing new laws and requiring enforcement of laws. Also, Bard doesn't mention the wonderful innovation of PurpleAir PM2.5 monitors. And on and on, sorry Bard, you're not perfect.

Question 1 to Bard A I) have there been any successful lawsuits by near neighbors of indoor residential wood burners by near neighbors?

Yes, there have been successful lawsuits by neighbors of indoor residential wood burners. In 2017, a New York couple won a \$1.7 million settlement from their neighbor after they were exposed to wood smoke from his fireplace. The couple suffered from a variety of health problems, including respiratory problems, headaches, and nausea. The judge in the case found that the neighbor's use of his fireplace was a nuisance and that he had failed to take reasonable steps to reduce the amount of smoke that was drifting onto the couple's property.

In another case, a California couple won a \$1 million settlement from their neighbor after they were exposed to wood smoke from his fireplace. The couple's children suffered from asthma and other respiratory problems. The judge in the case found that the neighbor's use of his fireplace was a nuisance and that he had failed to take reasonable steps to reduce the amount of smoke that was drifting onto the couple's property.

These are just two examples of successful lawsuits by neighbors of indoor residential wood burners. If you are being affected by wood smoke from your neighbor's fireplace, you may want to consider filing a lawsuit. However, it is important to speak with an attorney to discuss your specific case.

Here are some tips for filing a lawsuit against a neighbor who is using an indoor residential wood burner:

Gather evidence: You will need to gather evidence that shows that your neighbor's use of the wood burner is causing you harm. This evidence could include medical records, photographs, and witness statements.

Hire an attorney: An attorney can help you file a lawsuit and represent you in court.

Be prepared for a long battle: Litigation can be a long and expensive process. Be prepared to invest time and money into your case.

If you are successful in your lawsuit, you may be able to recover damages for your medical expenses, lost wages, and pain and suffering.

RAWSEP View: It is more cost effective for the ordinary person to complain to your Health Department and get laws passed that your Health Department can use to shut down the residential wood burning with evidence from a PurpleAir PM2.5 monitor of pollution levels exceeding Environmental Protection Agency (E P A) “safe” limits. Then society as a whole will also profit from your efforts, and new laws and enforcement will protect human health and slow climate change.

Here are some ideas on how to stop indoor residential wood burning (from Bard, A I):

Educate the public about the health and environmental risks of indoor wood burning. Many people are not aware of the harmful effects of indoor wood burning, including respiratory problems, heart disease, and cancer. Public education campaigns can help to raise awareness of these risks and encourage people to switch to cleaner heating options.

Provide financial incentives for people to switch to cleaner heating options. Many people cannot afford to switch to cleaner heating options, even if they are aware of the benefits. Financial incentives, such as tax breaks or rebates, can help to make cleaner heating options more affordable.

Enforce existing laws and regulations that restrict indoor wood burning. In many areas, there are laws and regulations that restrict indoor wood burning. However, these laws are often not enforced. Enforcing these laws can help to reduce the amount of indoor wood burning.

Provide access to clean cooking and heating options. In many developing countries, people rely on wood burning for cooking and heating. Providing access to clean cooking and heating options can help to reduce the amount of indoor wood burning in these areas.

These are just a few ideas on how to stop indoor residential wood burning. By taking a comprehensive approach, we can reduce the harmful effects of indoor wood burning and improve the health and environment of our communities. brainstorm how fine particulate matter affects human health, with the latest statistics.

Fine particulate matter (PM2.5) is a type of air pollution that is made up of tiny particles that can be inhaled deep into the lungs. These particles can come from a variety of sources, including burning fossil fuels, wood, and other materials. PM2.5 is a major health hazard, and exposure to it has been linked to a number of health problems, including: Premature death. PM2.5 exposure has been linked to an increased risk of premature death, particularly in people with heart or lung disease.

Heart disease. PM2.5 exposure has been linked to an increased risk of heart disease, including heart attacks and strokes. Stroke. PM2.5 exposure has been linked to an increased risk of stroke.

Asthma. PM2.5 exposure can trigger asthma attacks and make asthma symptoms worse.

Chronic obstructive pulmonary disease (COPD). PM2.5 exposure can worsen COPD symptoms, such as shortness of breath and coughing.

Lung cancer. PM2.5 exposure has been linked to an increased risk of lung cancer.

In addition to these health problems, PM2.5 exposure can also cause a number of other health problems, including: Respiratory infections. PM2.5 exposure can increase the risk of respiratory infections, such as pneumonia and bronchitis.

Switching narrators, the paragraphs below were written by a human being, a member of Residents Against Wood Smoke Emission Particulates.

RAWSEP redefinition of Fugitive Emissions to mean residential wood burning emissions.

The definition of Fugitive. A fugitive (or runaway) is a person who is fleeing government or non government [questioning](#), or [outraged private individuals](#).

The standard definition of Fugitive Emissions. Fugitive emissions are leaks and other irregular releases of gases or [vapors](#) from a pressurized containment – such as appliances, mostly from industrial activities.

The Wood smoke redefinition of Fugitive Emissions. Residents can track them down. [Governments won't make the collar](#). What gives? "Wood Smoke Emissions aren't counted in the United States in count of reduction of pollution emissions showing progress toward fulfilling each nation's Climate Goals". "Governments even give subsidies for Biomass (wood) burning and give subsidies for the ineffective and expensive use of Carbon Capture at Biomass (wood) burning plants."

Japan now discloses the counts of emissions from their Biomass (wood) burning plants, since April 2023 but Japan does not include Biomass (wood) burning emissions in official counts of emissions from all sources. Japan, like other nations who have Climate Goals, does not count Biomass (wood) plant emissions when showing progress toward fulfilling each nation's Climate Goals. However, it will be interesting for Residents Against Wood Smoke Emission Particulates to calculate the percentage of total power plant air pollution emissions that Japan's Biomass (wood) plant emissions contribute. Wood burning produces more CO2 and PM2.5 emissions than Coal burning and wood burning produces 450 times the particulates than natural gas burning. PM2.5, particulate matter of 2.5 micrometer size, is the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths. Wood smoke is 90% PM2.5 and the Carbon Dioxide (CO2) emitted by wood burning hastens climate change. What does the political designation of Carbon Neutrality for Industrial (wood) burning mean for Residents Against Wood Smoke Emission Particulates? Residential Wood Burning (if detected hyper-locally, often with resident owned PurpleAir PM2.5 monitors) does not

count toward each nation's Climate Goals. The lie of Carbon Neutrality does not formally apply to Residential Wood Burning, but it formally applies to Biomass (wood) burning plants that receive Government subsidies and are called "renewable". Without the formal designation of Carbon Neutrality applied to residential indoor wood burning, the emissions from residential wood burning could be counted by local Health Departments and the data could be evidence to shut down each residential wood burner, hyper-locally, one by one if necessary.

California, Laguna Beach

RAWSEP View: Wood fire divides people and contributes to early human deaths. Wood burning produces particulates of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths.

[From Fire Pits to Lifeguard Pride Tower: Residents Share Concerns - Laguna Beach Local News](#)

Laguna Beach Independent Newspaper

"I hope you will restore the wood-burning fire pits," Fried said during public comment. "When you guys took control of our southern beaches from ...

May 27, 2023

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.

Fire pit removal was discussed during the Laguna Beach City Council meeting on May 16. Residents gathered in person and via Zoom to express concerns and share thoughts on the next steps for the South Laguna beaches.

Following the city's acquisition of Laguna's southern beaches from the county in March, residents and community members proposed various ideas for how to move forward. One issue was the reinstatement of the fire pits at Aliso Beach. During the transition of South Laguna beaches to the city, the last fire pit was removed, leaving Laguna with the choice of either purchasing wood or propane fire pits. "The recommended action is to consider purchasing portable propane fire pits and develop an application to rent portable fire pits at Aliso Beach," Curran said. "Permanent fire pits at lease will provide some issues due to the location within the very high fire safety zone." Resident Billy Fried said he hoped to see the return of the fire pits to restore a sense of community to Laguna Beach. "I hope you will restore the wood-burning fire pits," Fried said during public comment. "When you guys took control of our southern beaches from the county, we all expected you would preserve our freedoms, not take them away. The fire is what unites people."

California, Humboldt County

[Letters to the editor | May 28, 2023 - Times-Standard](#)

Times-Standard

We need to stop romanticizing wood burning, and ignoring the harm it causes. Wood smoke is air pollution. Links to hundreds of relevant ...

Times Standard

Letters to the editor | May 28, 2023

Wood stove use a cause for concern.

It was concerning to see a photo of an antique wood stove, currently installed and obviously being used, featured as part of a historical renovation. (["Preservation Award Winners Named," May 21](#)).

It would be much, much better from a health perspective, both for the homeowner and for the neighbors, to keep the wood stove as an unused historical display piece.

Even modern certified wood stoves have been linked with more harm than most people realize. Even when used as recommended with dry, seasoned wood, they produce large amounts of surprisingly toxic and carcinogenic air pollution. Heating with a wood stove has been linked to, among other things, increased illness-related emergency hospital visits for children under 3; more heart attacks in seniors; having a 74% higher risk of developing dementia; up to a 12-year reduction in life expectancy; and much more.

Research recently came out linking the polycyclic aromatic hydrocarbons (PAHs) that are abundant in wood smoke with increased risk of rheumatoid arthritis. They've also been linked to detrimental effects on fetal and child development, worsened cardiac symptoms, and increased cancer risk.

The health-related externalized costs of wood heating have been quantified in several studies, coming out to several thousand dollars annually per stove.

We need to stop romanticizing wood burning, and ignoring the harm it causes. Wood smoke is air pollution.

Links to hundreds of relevant peer-reviewed studies, articles, and more are on the website of Doctors and Scientists Against Wood Smoke Pollution: www.dsawsp.org.

Maine

RAWSEP View: **Maine's oil distributors have been linked to campaigns against heat pumps.** wants to replace heating oil with residential wood burning, which is replacing a dirty heating source with a dirtier heating source.

Here is the Bard A I answer to a question about whether heating oil is more or less polluting than residential wood burning.

Question 2 to Bard A I) Is use of residential heating oil as polluting as residential wood burning?

Residential heating oil and wood burning are both sources of air pollution. However, **wood burning is generally considered to be more polluting than heating oil.** This is because wood burning produces more particulate matter, which can contribute to respiratory problems and other health problems. Wood burning also produces more carbon monoxide, which can be deadly.

In addition, wood burning can contribute to smog and acid rain. Smog is a mixture of pollutants that can cause respiratory problems, heart disease, and cancer. Acid rain is caused by pollutants from burning fossil fuels, such as coal and oil, and can damage trees, lakes, and other ecosystems.

Heating oil, on the other hand, produces fewer pollutants than wood burning. However, heating oil still produces some pollutants, such as nitrogen oxides and sulfur dioxide. These pollutants can contribute to smog and acid rain.

If you are considering using residential heating oil or wood burning to heat your home, it is important to weigh the environmental and health risks. **If you are concerned about the environment, you may want to consider using a cleaner heating source, such as solar or geothermal heat.**

Here are some additional things to consider when choosing between heating oil and wood burning:

Cost: Heating oil is generally more expensive than wood burning. However, the cost of wood can vary depending on where you live.

Efficiency: Heating oil furnaces are generally more efficient than wood stoves. This means that they will produce less heat loss and save you money on your heating bill.

Maintenance: Heating oil furnaces require less maintenance than wood stoves. This is because they do not need to be cleaned as often and do not produce as much creosote.

Availability: Heating oil is more widely available than wood. This means that you will not have to worry about running out of wood during the winter.

[New wood heat options come with climate trade-offs - The Maine Monitor](#)

The Maine Monitor

Many climate scientists disagree with the claim that burning wood for energy, as opposed to fossil fuels, has an advantage in slowing the climate ...

May 29, 2023.

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.

This is the third part in the Monitor's series on reducing Maine's reliance on pricey, planet-warming home heating oil.

Many climate scientists disagree with the claim that burning wood for energy, as opposed to fossil fuels, has an advantage in slowing the climate crisis. It's a controversial strategy that hinges on a lot of tricky assumptions about forest management, timelines and more. This debate is especially important in Maine, the [most heavily forested state](#) and, as The Monitor reported in this series, the one [most heavily reliant](#) on dirty, expensive oil for home heating. Top 10 states with highest proportion of households using wood heat. Vermont and Maine are 1 and 2. But some

scientists who [oppose a shift](#) to wood-based energy dispute this rosy perspective. Maine is the most forested state in the country, with huge areas covered in trees — especially in Northern Maine, seen here from Route 1 near Houlton looking toward Mount Katahdin.

(According to the scientifically debunked, but sometimes politically accepted, theory of Carbon Neutrality of wood burning) these forestlands offset the majority of the carbon that Maine emits from home heating, transportation and other uses of fossil fuels. **"Carbon neutrality, which is what the industry focuses on, is not**

going to bring about climate neutrality,” said John Sterman, a professor of system dynamics at MIT who helps run a widely used climate solutions simulator called [En-ROADS](#). This data platform shows that using more bioenergy for heat or power would generally increase, not decrease, global temperatures. The key problem, for near neighbors of indoor residential wood burners, is the particulate pollution of wood burning, PM2.5, particulate matter of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths, because wood burning emissions are 90% PM2.5. The key problem, Sterman said, is in the timeline. When wood is burned, it emits carbon into the atmosphere, where that carbon warms up the earth. But even when those new trees have absorbed the same amount of carbon as was originally emitted by burning wood, it doesn't undo the climate warming effects that took place in the meantime. It doesn't undo the health harming particulate pollution effects on humans that took place in the meantime. “That means all during that period, and after ... you have a warmer planet,” Sterman said. “You're going to have higher sea levels, you're going to have more extreme weather, you're going to have lower crop yields, you're going to have more people dying from excess heat, and none of those effects magically go away just because the atmospheric CO2 would stop rising.”

Sterman's preferred heating oil alternative is the same one Maine has prioritized in its climate plans — intensive home weatherization to lower energy use altogether, and efficient electric heat pumps, which don't emit their own carbon and run on an increasingly clean grid. Maine's oil distributors have been linked to campaigns against heat pumps. Many wood heat proponents argue they favor an all-of-the-above approach — in line with many Mainer's traditional use of a wood stove as a backup fuel source that doesn't rely on electricity. Wood stove manufacturers want to get their foot in the door, and never stop burning wood, to continue their profits at the expense of human health. The solution is a no-emissions solution, if industry, politicians and government officials pay attention to the harmful effects of wood burning on human health. But the Main Climate Council Chair cavalierly doesn't even care about the climate warming effects of wood burning contributing to climate change. “There is a place for biofuels and wood heat — it's just not a no-emissions solution, So (particulate and CO2 emissions from wood burning stoves) can't be kind of the primary focus.” said the Maine Climate Council chair. RAWSEP believes Maine needs a new, better, environmentally friendly, human health friendly, Maine Climate Council chair. Or change the name of the Maine Climate Council to Wood Stove Industry Council. Wood burning produces more PM2.5 and CO2 than Coal Burning. Wood burning produces 450 times more particulates than natural gas burning.

Oregon

RAWSEP View: Wood smoke is wood smoke. Indoor residential wood burning smoke is the same or worse than wildfire smoke, since residential wood burning can include chemically treated wood.

[How wildfire smoke harms lungs: a toxicologist explains - oregonlive.com](#)

Oregon Live

Exposure to PM2.5 from smoke or other air pollution, such as vehicle ... Being exposed to wood smoke won't independently cause someone to have a ...

Australia, Sydney, Affluent Neighborhood

RAWSEP View: It would have been better if a Bard A I brainstorm had written a complaint for the woman in the article below to present to her wood burning neighbor. The cool rationality of a machine could have shot down all the excuses for wood burning (because they are illogical) and couldn't have been accused of being “furious”, or a “serial complainer” (a machine could be programmed to always both point out flaws and provide solutions, in a machine-appropriate neutral tone), and since smoke is not necessarily bad for the health of a machine (although at high levels it could clog up the works and high temperatures have been known to bring down computer networks) the machine could spit out dialogue forever with no letup. But since the argument this woman is making is that she is a human being, and fine particulate pollution from her neighbor's wood smoke is bad for her health, as a human being, it is entirely appropriate for this woman to point out those facts to her neighbor. The Bard A I bot should be asked, to what lengths do tabloid newspapers go to today to readers who are quite illogically residential wood burners? Insult the person who asks the residential wood burner to stop? Check. Insult asthma sufferers? Check. Imply that only people with Asthma are affected by wood smoke pollution, which causes lung cancer, and early death, even in formerly healthy people? Check. Ignore the fact that a near neighbor of a residential wood burner has a problem that could be easily stopped by the wood

burner stopping burning wood? Check. Present it as a problem to the residential wood burner alone, being shamed, instead of a problem for one asthmatic surrounded online by trolls who extoll wood burning? Check. Present several delusional, socially awkward commenters to bolster the pollution generating neighbor's position? Check. Let Little Exxon Mobil pollution and wood burning pollution troll clones have their say in the Daily Mail? Check. So, is Society helped by such grubby journalism? Not on your life. Every quote from the woman, the canary in a coal mine, is wholeheartedly seconded by Residents Against Wood Smoke Emission Particulates. Facebook is a place to start, but a responsible and responsive Health Department is the place to end it (wood smoke emission particulates from your neighbor's indoor wood burning). The woman is describing her predicament and also bolsters her argument by saying particulate pollution adversely affects wildlife and contributes to climate change as well. These are valid points that have to be made and have been made again and again because they are true. The fact that they have to be reiterated is the fault of residential wood burners who will not stop. In this instance, as in many or most instances, there is no financial need to burn wood rather than clean or cleaner alternatives. Most recently, the clean alternative is Heat Pumps that work at 40 degrees below zero Fahrenheit. This article got my attention, as a human being, because it dared to use the word "affluent" about residential wood burners, which brings a note of reality to this mostly scurrilous recitation. Wood burning is not done for financial reasons, in many or most instances. There is no excuse for indoor residential wood burning. Another technology, besides occasional use of A I for research on the harmful effects constantly being discovered about indoor residential wood burning, is the use of the technology of PM2.5 monitors like the PurpleAir PM2.5 monitor which is already used side by side with E P A PM2.5 monitors on U S Airnow Maps of Smoke and fire, correlated to the \$100,000 E P A PM2.5 monitors with a simple mathematical formula. Local Health Departments could use the historical data from the consumer-owned \$249 monitors (or the Health Department could hand out PM2.5 monitors free as a public health service to any resident who complains of their neighbor's wood smoke) and government authorities could shut down polluting residential wood burning without having to enter the homes of the wood burners. Requires legislation or passage of ordinances locally. It would be better for there to be sweeping, federal legislation, since air pollution crosses borders, which is why Environmental Protection Agencies are federal government entities.

[Sydney Northern Beaches chimney wood smoke Facebook stoush erupts | Daily Mail Online](#)

Daily Mail

Furious homeowner shames neighbour for burning wood to keep warm in affluent Sydney suburb. A campaigner against wood fires is bitterly dividing her affluent community with her most recent post showing a house chimney billowing smoke that ...

Daily Mail Australia May 27, 2023

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.

Furious homeowner shames neighbour for burning wood to keep warm in affluent Sydney suburb.

Facebook user upset about chimney smoke.

Says their lungs and nesting birds suffer.

May 28, 2023

A serial complainer has continued to ruffle feathers in her affluent suburb after whinging about the chimney smoke coming from her neighbor's house. The woman, who lives on [Sydney's](#) northern beaches, took aim at her neighbour for burning wood in their fireplace at their house. The woman says she suffers from asthma and that pollution has become so bad in her area she has been forced to live in a van. She has previously caused a stir online for her comments about the use of firewood in the area, where the median price for a home is about \$2million. A woman in the affluent northern beaches area of Sydney has complained that her neighbor's wood fire smoke is bad for her health. The woman posted a photo of her neighbor's house to Facebook shaming them for using firewood in a post that appears to have since been taken down. 'This is my house behind this smoke,' she wrote in the post. 'My lungs are suffering, our nesting birds are suffering. Please think cleaner air.' The woman has been campaigning against the use of firewood in the area since at least August last year. She revealed the smoke affected her health to the point she could no longer sleep at home. 'I have to sleep in my van near the beach as sleeping at home is not an option,' she wrote. 'I'm asthmatic, the smoke makes me seriously unwell. Like cigarette education has reduced lung cancer in Australia, wood smoke is also deadly.' She said she had called her council about the problem but to no avail. The woman claimed smoke from the fires was worsening climate change - with the claim sparking more backlash. However, the campaigner said they had 'read up on the subject, it is worse than I expected'.

United Kingdom

U K, Lancashire

RAWSEP View: Smoke inhalation can cause casualties in a house fire, and smoke inhalation can make casualties of near neighbors of residential wood burners.

[Casualty treated for smoke inhalation following house fire in Burnley | Lancashire Telegraph](#)

Lancashire Telegraph

... treated for smoke inhalation following a fire at a property in Burnley, Two fire engines attended the incident at a house on Healey Wood Road.

Asia

South Asia

[Air pollution linked to early death in heart failure patients: Study - ANI News](#)

ANI News

This includes particulate matter (PM)2.5 and PM10, which are mostly caused by vehicle exhaust emissions and industrial smells.



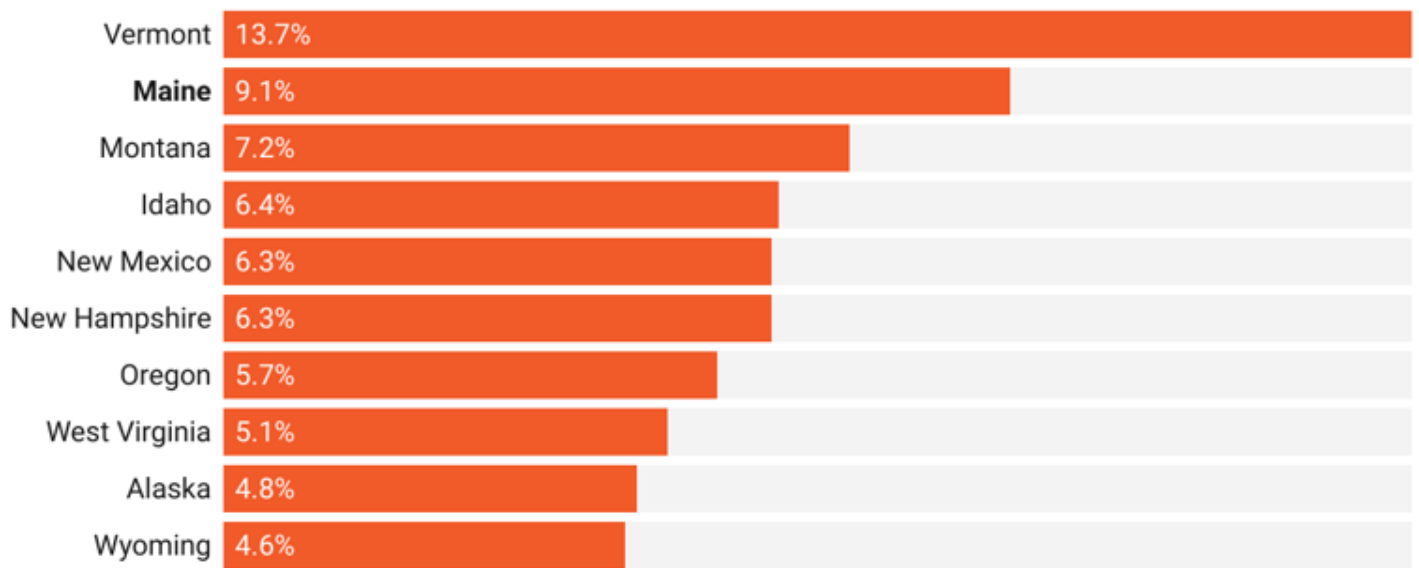


HOOKED ON HEATING OIL

A series about Maine's use of
fuel oil and our transition to
new kinds of heat.



Which states have the highest proportion of households using some form of wood heat?



American Community Survey estimates, 2017-2021 averages.

Chart: Annie Ropeik • Source: U.S. Census Bureau • Created with Datawrapper