

Episode 56OK January 4, 2024. In Pakistan, the government is asked to give respect to low cost PM2.5 monitor data. In this Episode 56OM 1) Defra in the United Kingdom paid for campaigns for and against wood burning stoves, and the conservative think tank Bright Blue advocates for labels on wood stoves 2) In New York state, an advocate for Heat Pumps replacing fossil fuels, in a step back from clean air advocacy, suggests that wood burning could be used as a backup to the Heat Pumps 3) Maryland, Baltimore study in Guatemala, India, Peru, and Rwanda locations from 2018 to 2021. RAWSEP View: Swap of Wood burning stove for Heat Pump should have been done for this study. Pneumonia not linked to PM2.5 level from switching from Wood burning stove to Liquid Petroleum for home heating, in study. 4) Pakistan, between Islamabad and Rawalpindi. An article advocating for more low cost PM2.5 monitors and more government respect for the data from these monitors. 5) Headlines. 1) Defra in the United Kingdom paid for campaigns for and against wood burning stoves, and the conservative think tank Bright Blue advocates for labels on wood stoves United Kingdom. [Defra paid for wood burner ads while funding cancer risk campaign - The Times](#) Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. One advert for the campaign, which features a smoke cloud called "Burny", said: "Domestic wood burning, linked to increased risk of asthma and lung. The government has paid Instagram influencers for adverts about wood burners while simultaneously funding councils to warn that the same stoves. The government has paid Instagram influencers for adverts about wood burners while simultaneously funding councils to warn that the same stoves risk cancer. Pollution from wood-burning stoves surged 124 per cent between 2011 and 2021 as middle class households bought them as lifestyle choices. United Kingdom. [DEFRA Funds Campaigns Both for and Against Wood Burners - Guido Fawkes](#) Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Defra has also been funding the London Wood Burning Project, a group. DEFRA Funds Campaigns Both for and Against Wood Burners. the Welsh government has been funding [dodgy](#) adverts. the Department for Environment, Food and Rural Affairs (Defra) have been paying social media influencers to post [videos](#) about why we should use wood burners this winter, advertising this trendy way of heating homes is great thanks to their lovely "cosy vibe". Defra has also been funding the London Wood Burning Project, a group of 18 London boroughs sharing information on the "human health impacts" of wood burners. The campaign warns against wood burners leading to cancer and lung disease, with ads labelling them "burny", with taglines like "careless not cosy." United Kingdom. [UK Government Caught in Paradox over Wood-Burning Stove Messages - BNN Breaking](#) The UK government has been found endorsing conflicting messages about wood-burning stoves, with one promoting their use and the other warning of. UK Government Caught in Paradox over Wood-Burning Stove Messages January 3, 2024. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Defra has been financing Instagram influencers to promote the use of drier wood in these stoves, local councils, under the same government roof, are cautioning the public about the health hazards associated with particulate matter (PM2.5) emissions from these very stoves. Surge in PM2.5 Emissions The decade from 2011 to 2021 has witnessed a staggering 124% surge in PM2.5 emissions from wood-burning stoves, contributing to over a fifth of PM2.5 pollution. These minute particles, less than 2.5 micrometers in diameter, are known to pose serious health risks. They can penetrate the respiratory system, reaching the lungs and even the bloodstream, leading to severe health issues including cancer. there has been a strong call for health labels to be added to wood-burning stoves. Such labels would provide clear and unambiguous information to consumers, allowing them to make informed decisions about the use of these stoves. the UK government will need to address this issue with clarity and transparency, ensuring that public health and environment are not compromised by conflicting narratives. United Kingdom, Birmingham. [Minister issues wood-burning stoves update as smoke emission limits to be lowered](#) Birmingham Live. Minister Robbie Moore has responded to questions over the burning of unauthorised fuels such as wood in smoke control areas. In December, the minister confirmed that the Government's Environmental Improvement Plan, published in January 2023, had given a commitment to lowering the emission limits for solid fuel stoves in smoke control areas from 5g of smoke per hour of operation to at least as low as 3g of smoke per hour of operation. Minister Robbie Moore has responded to questions over the burning of unauthorised fuels such as wood in smoke control areas. January 4, 2024. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization Conservative think tank Bright Blue had said there was a "mistaken belief" that "domestic burning is a safer, more environmentally friendly way of heating one's home than gas boilers." Its report said existing warning labels on the stoves were focused on carbon monoxide emissions and did not include any mention of tiny particles called PM2.5, which are less than 2.5 micrometres in diameter and invisible to the naked eye. Documents from DEFRA, the Department for Environment, Food and Rural Affairs, explain: "These particles are known



to enter the bloodstream and are carried into many organs in the body and are linked to a range of health impacts including respiratory and cardiovascular illness, such as aggravation of asthma and respiratory symptoms. This in turn has been linked to an increase in hospital admissions as well as mortality from cardiovascular and respiratory diseases and lung cancer." Around 1.5 million households in the UK are believed to own a wood-burning stove. Demand surged by 40 per cent last year as more people turned to using logs to heat their homes because of the soaring costs of gas and electricity in the ongoing energy crisis. However, wood is defined as an unauthorised fuel and can only be burned in [exempt appliances such as some boilers, cookers and stoves](#). In smoke control areas, you can only use [authorised fuels](#) - such as briquettes - unless you have an appliance that has been approved by DEFRA as being exempt from those rules.

Geraint Davies, Independent MP for Swansea West, asked DEFRA if it has assessed the testing of stoves for receiving exemptions to burn wood in smoke control areas so that potential pollution is fully under control. In response, Robbie Moore, the Minister for Water & Rural Growth at DEFRA and Conservative MP for Keighley & Ilkley, says tests by external contractors are checked to ensure emissions do not exceed the limit of 5g of smoke per hour. This limit is to be lowered in future as controls are tightened. 2)In New York state, an advocate for Heat Pumps replacing fossil fuels, in a step back from clean air advocacy, suggests that wood burning could be used as a backup to the Heat Pumps RAWSEP View: Natural gas could be the cleanest back up to electric Heat Pumps. The second comment in this article below, a comment in favor of changing over from fossil fuels to electricity using Heat Pumps in New York State contains this jarring sentence. "Where temperatures go even lower for long periods, **wood**, propane, or electric resistance back-up heating (to Heat Pumps) may be warranted." RAWSEP view is that use of wood burning as a backup to Heat Pumps is never warranted. Wood burning is more polluting than fossil fuel burning. Wood burning emits more PM2.5 and C O 2 than the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 than the fossil fuel 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. PM2.5 also hastens climate change. [It's Debatable: Homes free of fossil fuel - The Adirondack Almanack](#) - The Adirondack Almanack. State policies encourage replacing fossil fuel burning systems, like this natural gas boiler, with ones that use electricity. Debatable: Homes free of fossil fuel. [25 Comments](#) The question: Do you share NY's all-electric home goal? **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization.** Comment 1)Strike a compromise allowing for consumer choice. (A Heat Pump's)upfront cost can burden homeowners and businesses. New York's grid is already under stress during peak demand, and the increased load from a widespread shift to electric heating systems could exacerbate the problem. This could lead to more frequent blackouts and strained grid infrastructure. executive vice president of New York State Builders Association, Castleton- on-Hudson. Comment 2)Electric heating is good for the planet. The state Legislature passed the All Electric Building Act this year, amending New York's building code to require that new buildings be built without fossil fuel appliances and heating systems starting in 2026. The effective date was set to appease developers and utilities, but there's no reason to wait. in the North Country where heat pumps represent dramatic cost savings—thousands of dollars a year less than heating with propane—for most home and building owners. There are two general categories of heat pumps for homes, air source pumps which extract heat from the outdoor air, and ground source pumps which extract heat from the ground. Air source pumps are generally cheaper to install, but not as efficient as ground source pumps. Ground source (also known as geothermal) are more expensive to install because it is labor intensive to put a heat exchange loop into the ground. But that's a one-time expense. Geothermal systems are the most efficient, lowest maintenance and longest lasting heating systems on the market today. Cold climate air source heat pumps are widely available. They are efficient to 5 degrees and operate down to minus 19. Ground source pumps maintain very high efficiency regardless of outdoor temperature because the ground below the frost line maintains the same temperature year-round. In the Adirondacks, both kinds of heat pumps should perform well in new buildings built to high efficiency standards. Thousands of structures across every region of New York, ranging from single-family homes to large mixed-use buildings, already heat and cool with heat pumps. In frigid Scandinavia, heat pumps enjoy widespread use. In Europe, you'd be unlikely to find a kitchen without an induction stove. Induction cooking, preferred by many top chefs, is fast, precise, and safe. The buildings we build today will last the next hundred years. They should be outfitted with 21st century equipment and appliances that will benefit the owner and the planet. —advocacy and organizing director for New Yorkers for Clean Power, Horseheads. 3)Maryland, Baltimore study in Guatemala, India, Peru, and Rwanda locations from 2018 to 2021. RAWSEP View: Swap of Wood burning stove for Heat Pump should have been done for this study. Pneumonia not linked to PM2.5 level from switching from Wood burning stove to Liquid Petroleum for home heating, in study. [Trial: Cleaner Cookstove Fuel Not Enough to Improve Infant Health | MedPage Today](#) Mean pre- and postnatal 24 hour exposures to PM2.5 were lower among intervention participants (35.0 vs 103.3 µg/m3 and 37.9 vs 109.2 µg/m3. Fine particle exposure was reduced, but no improvements were seen in pneumonia rates, stunting. Swapping out liquid petroleum (LP) for biomass cooking fuel during pregnancy made little difference for infant growth or pneumonia rates, two analyses of a randomized controlled trial in low-resource settings revealed. Trial: Cleaner Cookstove Fuel Not Enough to Improve Infant Health — Fine particle exposure was reduced, but no improvements were seen in pneumonia rates, stunting. MedPage Today January 3, 2024. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization.**



Commuters make their way during heavy fog at Murree Road during night hours in Rawalpindi on January 03, 2024. —

Swapping out liquid petroleum (LP) for biomass cooking fuel during pregnancy made little difference for infant growth or pneumonia rates, two analyses of a randomized controlled trial in low-resource settings revealed. The cooking fuel intervention successfully reduced exposure to household air pollution as measured by fine particles with a diameter of $\leq 2.5 \mu\text{m}$ (PM_{2.5}) compared with continued use of wood, charcoal, or other biomass fuel for cooking, reported Johns Hopkins University in Baltimore, according to their analysis of the HAPIN trial published in the [New England Journal of Medicine](#). [opens in a new tab or window](#) accompanying paper [opens in a new tab or window](#) regarding data from the trial. Most childhood pneumonia deaths occur in low- and middle-income countries where biomass fuel is commonly used, and about 30% of those deaths are attributed to indoor air pollution. Household air pollution exposure in childhood is also linked to stunted growth, defined as being more than two standard deviations below the median height or length for age and sex. The [HAPIN trial](#) [opens in a new tab or window](#) included 3,061 pregnant women ages 18-34 who remained eligible following randomization and had a live singleton birth. The trial was conducted in one district in Jalapa, Guatemala; two districts in Tamil Nadu, India; six provinces in Puno, Peru; and one district in Kayonza, Rwanda. Randomization was stratified by location. Randomization ran from May 7, 2018, to Feb. 29, 2020, with the last follow-up measurements received Sept. 21, 2021. Thus, the COVID-19 pandemic led to interruptions in some home assessments, the researchers noted. Other possible limitations included incomplete assessments during facility visits, as well as a lack of diagnostic standards surrounding pneumonia. 4) Pakistan, between Islamabad and Rawalpindi. An article advocating for more low cost PM_{2.5} monitors and more government respect for the data from these monitors. [Sensing a city's air quality - The News International](#) The PM 2.5 and PM 10 monitors are broadly divided into 'compliance monitors' and 'low-cost sensors'. The difference between the two is in the pricing. The low-cost sensors have effectively filled a gap since BAM monitors are too few and their results are not representative of the sprawling urban landscape. A typical large city needs at least 20 BAM monitors to accurately measure the air quality, but the cost is prohibitively high. Sensing a city's air quality. Natural air composition is 72% nitrogen, 21% oxygen, 2.0% carbon dioxide, and then the rest of the gases. January 04, 2024. [Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization.](#) In Lahore's air quality monitors from IQAir installed by the citizens started providing data on their website a few years ago and the Pakistan Air Quality Initiative (PAQI) along with citizen activists started highlighting the issue. The first air quality monitor was installed in Los Angeles in 1955 to track air pollution and advise industrial shut down based on that data. Later, USEPA defined the Air Quality Index to harmonize the measurement of air quality across the US; this was followed by efforts in China and Canada. The PM 2.5 and PM 10 particles are 2.5 micrometers and 10 micrometers respectively, about 20 to 5 times smaller than our hair. The PM_{2.5} particles are residuals of unburnt fuel in the air. recent research has linked these particles with strokes, miscarriages and even to everyday experiences such as tiredness. The PM 2.5 and PM 10 monitors are broadly divided into 'compliance monitors' and 'low-cost sensors'. The difference between the two is in the pricing as the name suggests but inherently it is the difference in the technologies to measure the air quality pollutants. The compliance monitors use Beta Attenuation Monitoring (BAM) technology where the air is let in through a cycling ribbon and passed through a filter. Beta rays are passed through the filter and detected on the other side of the filter. The beta-ray attenuation is exponentially proportional to the mass accumulated on the filter and is then used to determine the concentration of the particulate matter in the air. These instruments are expensive and require regular maintenance and calibrations, and are typically owned by governments and research institutions. This concentration is then fed into the formulae to calculate the air quality index of the area. The other type of popular air quality monitors is called Low-Cost Sensors (LCS) which are much smaller in size and work on the light scattering principle and are connected to the internet to report data in real time to cloud servers. Air is continuously let in through a small opening and laser light is beamed on the air. The amount of light scattered is then used to calculate the concentration levels of PM 2.5. This tradeoff between cost and accuracy has led to a huge popularity of low-cost sensors amongst the science enthusiasts, citizens and other interest-based groups, who own and report the data back to the cloud and monitoring sites. The low-cost sensors have effectively filled a gap since BAM monitors are too few and their results are not representative of the sprawling urban landscape. A typical large city needs at least 20 BAM monitors to accurately measure the air quality, but the cost is prohibitively high. In Pakistan, Lahore has only one deployed on a van owned by the EPA that is mobilized on a weekly basis. None of the other cities has air quality monitors other than the ones deployed by the US Embassy and consulates that regularly publish the data. The low-cost sensors deployed by citizens and organizations are on the other hand publishing data on a real-time basis. It is estimated that there are about 100 low-cost sensors in Pakistan and of them 50 per cent are active at any given time. The government response to air quality monitors has been irrational as it has outrightly rejected the readings from these monitors, citing them as unreliable. This assertion stems from a lack of understanding of technology and interpretation of data. Cities like Karachi, Lahore, Islamabad, Peshawar, Quetta, Faisalabad, Hyderabad etc require at least 50 monitors to detect the local air quality insights. One of our monitors, for example, deployed on main M A Jinnah Road in Karachi peaks in the early hours of the day in winter; the unrealistically high air quality index at that location and at that time of the day led us to inquire locally to find out that the cause is bonfire lit by the guards at night. Now that kind of local information is not captured by the lone BAM monitor, yet it is useful information for the neighbourhood to manage the air quality. It is unfathomable that governments are rejecting information they are getting for free at the hyper local level that they would not be able to get through their expensive units. The low-cost sensors can be used in many ways, one of which is to have a hub-and-spoke network of BAM and low-cost monitors to supplement the BAM data with the hyper-local information. This also helps in creating the impact of other factors such as wind direction. In cities like Karachi where the government does not have any plans for BAM, a network of low-cost monitors can provide granular data. 5) Headlines. United States. [Clean Air Act Permitting Challenges - The National Law Review](#) EPA's proposed revisions to the NAAQS for fine particulate matter ("PM_{2.5}") would make obtaining the required permit far more difficult. EPA has. Arizona, Phoenix. [New Year's Day sets record high smoke levels in Phoenix - AZCentral](#) Due to the increased levels of ground-based and aerial fireworks as well as wood burning, smoke levels saw a drastic rise on the year's inaugural day. Moderate levels of PM 10, or dust, and PM 2.5, smoke, were slated for Wednesday at 55 and 60, respectively, before dust concentrations dip while. Ohio, Celina. [The Daily Standard Pictures](#) A wood-burning furnace sits among the burnt remnants of a 10-by-20-foot structure at 8583 State Route 219 after a fatal fire destroyed the. India, Delhi. [Air quality dips to 'severe' level in parts of Delhi - Daijiworld.com](#) PM 2.5 reaching at 447 and PM 10 at 403. The CO was recorded at 79 or 'satisfactory'. The particulate matter (PM) 2.5 at Punjabi Bagh also reached. India, Dhaka. [Dhaka air pollution highest in 8 years - Prothom Alo English](#). The main source of pollution in Dhaka air is particulate matter (PM 2.5). The score is determined based on the presence of particulate matter.



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