Episode 56UW, June 17, 2024. Comment. What are the barriers to achieving wood smoke free air?

What are the barriers to achieving wood smoke free air? What are the barriers to near neighbors of indoor residential wood burners achieving clean, breathable air in their own backyards? As near neighbors wait for action by the government, federal Environmental Protection Agency , state, in the case of Wisconsin, the Department of Natural Resources, or local municipality Health departments, to address the problem of polluting, choking, unnecessary individual wood burning in this country, I will whittle down the reasons why we are asking the federal government in the form of the White House Environmental Justice Advisory Council (WHEJAC) and send this written message to you. I'm sorry I was unable to make a public comment at the last WHEJAC virtual meeting on June 5, 2024. Perhaps the EPA National Environmental Justice Community Engagement Call tomorrow, Tuesday, June 18, 2024, will address some of these points I will make below. My name is Linda Karr. I live in Madison, Wisconsin and am a member of Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization, https://RAWSEPresidents.com has PDFs of posts, with over 960 Youtube videos at https://www.youtube.com/@rawsepresidents4370/videos and Spotify podcasts at https://open.spotify.com/show/4Jk1ucPfFiCsTHdDRgTiQm I am a near neighbor of an indoor residential wood burner, whose wood smoke enters my yard and sickens me. I use a PurpleAir PM2.5 monitor to capture data on PM2.5 levels above Environmental Protection Agency National Ambient Air Quality Standards (EPA NAAQS). My PurpleAir PM2.5 monitor data is put on United States EPA Maps of Smoke and Fire alongside $100,000 EPA Regulatory Monitors, correlated to EPA Regulatory Monitors with a simple mathematical formula (PA x 0.514)+1.8304, During Canadian wildfire smoke incursions into the United States, which were experienced most acutely on June 7, 2023, the public is advised by governments, usually local governments to stay inside their sealed homes with multiple air purifiers running. That is how I have lived for the past 18 years since I moved into my home 60 feet away from an indoor residential wood burner who burns wood despite being connected like me to a natural gas line, and despite my wood burning neighbor racking up natural gas bills larger than mine on a monthly basis. My wood burning neighbor also owns a home roughly twice the assessment of my home, so indigence is not the reason for the wood burning. Since my home cost me $84,000 I might be called a low-income individual, also. So I have addressed the economic issue head on, which is usually the first point that people who burn wood give for burning wood inside their own homes, that it is cheaper to burn wood than use clean or cleaner alternate ways of heating their homes. I also would like to install solar panels on the roof of my house or in my yard, since my roof faces north and south, not the optimum facing for solar panels. The problem with installation of solar panels is that a network of solar panels in New York State worked 50 percent less efficiently during the Canadian wildfire incursion on June 7, 2023. So, besides the health adverse consequences of living 60 feet away from the indoor residential wood burner, my solar panels will most likely work at 50% efficiency if the wood burning continues after I install solar panels. In 2007 I started on the internet with postings about news stories around the world about the health effects of wood burning on near neighbors of indoor residential wood burning. This continued until 2013, after I had helped pass multiple local ordinances against Outdoor Wood Boilers in Wisconsin. The last one I participated in was the ordinance against Outdoor Wood Boilers in my own hometown of Madison, Wisconsin in February 2011. I began a lawsuit against my neighbor showing the unnecessary, polluting wood smoke was a nuisance (that is an understatement, putting it mildly, but that was the only legal path). but stopped after costs reached over $3,000. Lawsuits are out of the reach of the ordinary or low-

income individuals such as myself, and I believe that the government must address this problem to have a meaningful impact and break down the barriers to near neighbors of indoor residential wood burners obtaining relief and obtaining the right to breathe clean air again. Why is wood smoke a major nuisance, and a health hazard? Wood smoke is 90% PM2.5, 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. Wood burning emits 2.8 times the PM2.5 as the fossil fuel coal burning. Woodburning emits 450 times the PM2.5 as the fossil fuel natural gas burning. Despite these scientific facts, recently wood burning has replaced coal burning in industrial plants around the world, because of the scientifically debunked political theory of the Carbon Neutrality of Wood Burning. This scientifically debunked theory states that since a tree can be planted in place of a tree that is cut down to be burned for industrial energy, the tree is renewable energy and the tree will produce oxygen from carbon dioxide during the natural process of photosynthesis by the tree. In this way, a mature tree to replace another mature tree takes polluting carbon in the form of carbon dioxide out of the air, and negates whatever CO2 is emitted by burning the tree. However, one of the reasons this theory is debunked is that it takes decades or centuries for a tree to grow to the stature of the tree that is cut down, and in the meantime, over centuries or decades, CO2 and PM2.5 is being emitted by burning trees, in this scheme. Since wood burning emits 2.8 times the CO2 and PM2.5 of coal burning, as mentioned earlier, this is only Carbon Neutrality if you ignore the emissions from the actual wood burning. It is a fact that most people do not know, and a major area in which to educate people, that the wood burning plants that have popped up to replace coal burning plants are bringing us closer to climate change, not farther away, because lowering carbon emissions is only on paper, not in reality, when wood replaces coal as a fuel to burn. Wood burning emissions are ignored in each country's Climate Goals, in every country around the world. This is false accounting for Carbon, and is bringing us closer to Climate Change, as well as contributing to the air pollution of PM2.5 that causes many human illnesses and shortens lives around the world. The government barriers to near neighbors of indoor residential wood burners achieving clean air are 1)Certification of indoor residential wood burning appliances as "safe" by the EPA is a deeply flawed program and should not exist. 1a)The indoor wood stove certification program labeled New Source Performance Standards (NSPS) is a deeply flawed program according to the Office of the Attorney General (OIG) watchdog of the EPA, allowing most or all of wood stoves manufactured in the United States to perform below even the lax standards of the EPA, due to giant loopholes that allow manufacturer noncompliance. 1b)In 1987 the NSPS program started due to the erroneous belief, ludicrous in the face of what human beings can sense with their senses of smell, taste, vision, et cetera, that wood burning is a clean renewable form of energy. 2)Devaluing the reliable, accurate measurement of PM2.5 levels by resident owned PurpleAir PM2.5 monitors. Perhaps PurpleAir PM2.5 monitors should not even be correlated with EPA Regulatory monitors with a simple mathematical formula. The formula takes into account changing humidity, but for instance Wisconsin's monthly average of relative humidity changes one or two points from month to month, and that is probably similar to most United States. If a high PM2.5 reading near an indoor residential wood burning appliance without correlation seems like an anomaly in an EPA AirNow Map of Smoke and Fire, it might make people think there is wildfire smoke in their area when it is an indoor wood stove, I suppose the correlation formula is helpful to even out or smooth out the statistics, but by doing that the indoor residential wood burning component of the true, accurate, reliable PurpleAir PM2.5 reading is essentially ignored on US EPA Maps of Smoke and Fire. The PurpleAir PM2.5 maps themselves are accurate in

showing the levels of PM2.5 in the hyper-localized air in the back yard of a near neighbor of an indoor residential wood burner. The PurpleAir PM2.5 monitor data can pinpoint the problem individual or household that is producing unnecessary wood smoke pollution. Once such a dangerous problem is identified that problem should be dealt with by the government, since one individual near neighbor has no enforcement authority, but governments do. 3)Few EPA Regulatory PM2.5 monitors and spacing of EPA Regulatory PM2.5 monitors near industries rather than near residential areas. There is a bit of a lottery aspect to the placing of EPA Regulatory PM2.5 monitors, but there are many less EPA Regulatory Monitors in Wisconsin, for example, where there are 16 EPA Regulatory Monitors and approximately 90 PurpleAir PM2.5 monitors providing data on the Wisconsin portion of the US EPA AirNow Maps of Smoke and Fire. EPA Regulatory Monitors in the vicinity of PurpleAir PM2.5 monitors may be helpful as reference monitors, but they are not hyper-localized enough to show the true, harmful level of PM2.5 in the air in the yards of near neighbors of indoor residential wood burners. 4)Near neighbors are left to try to pass local ordinances against indoor residential wood burners. There should be a federal law that states that indoor residential wood burning appliances are health hazards, which they are. There are laws against drunk driving enforced after using data obtained from Breathalyzer tests on individuals. There are laws against speeding enforced after using data obtained by Radar Guns pointed at the individual car. There are laws against smoking in the workplace enforced after complaints by co-workers to their supervisors about co-worker's experience of secondhand smoke. There is testing of wood stove emissions of the cleanest stove in the United Kingdom, the Ecodesign stove, which yielded the scientific statistics mentioned above that wood burning emits 450 times the PM2.5 as the fossil fuel natural gas and wood burning emits 2.8 times the CO2 and PM2.5 as the fossil fuel coal burning. Wood burning's polluting emissions are ignored. Outdoor wood burning has been tackled by enforcement in the past, through successful local ordinances in Wisconsin, for example, against Outdoor Wood Boilers, possibly because outdoor wood burning is seen as more visible than indoor wood burning, although there is always the telltale smoke plume. But with PurpleAir PM2.5 monitors near indoor residential wood burning, indoor wood burning is no longer "invisible". There is a scientific way to measure the emissions, and there are many scientific, medical and statistical studies now that show that PM2.5 from wood burning causes lung cancer, asthma, many other illnesses, and shortens lives. Thank you to the White House Environmental Justice Advisory Council (WHEJAC) for allowing comment on this. The issue of pollution from wood smoke is also tackled by the Dogwood Alliance in the United States and many groups protesting the government subsidies for wood burning industry in the United Kingdom. Many of the members of RAWSEP are from Canada, Australia and New Zealand, where the same barriers to near neighbors of indoor residential wood burners seeking relief also exist. The vast majority of people in Africa and Asia experience health problems from PM2.5 pollution, and their countries experience economic upheaval as well as transportation upheavals such as downing of airplanes during PM2.5 incursion events, some caused by indoor residential wood fires, some caused by wildfires. There are alternatives for indigent people in the United States to wood burning in 2024. There are Heat Pumps that work down to 40 degrees below that are being given rebates of up to $8,000 based on a sliding income scale.