Episode 56VB. June 21, 2024. Parts 1 and 2, Encyclopedia against indoor residential wood burning.

Episode 56VB Part 1 of 2)Newsletter on Linked In by Richard Branson. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Ask Richard. Founder at Virgin Group. How do you train your brain to think inventively? Thanks to Aden from Sydney for the question. Answer. 1)Constantly ask questions and remain curious about everything. 2)Listen, deeply. 3)To be inventive, don't try too hard to be inventive. 4)Surround yourself with interesting people and give them the confidence to share their most abstract ideas. Then repeat steps 1) and 2). 5)Write everything down. 6)Have fun.

Note: This was intended as a book-length book. Fortunately for you and me, I found that headlines can tell the story sufficiently and are more likely to be read by you.

The Encyclopedia of Ending Indoor Residential Wood Burning. June 2024 Edition. This will be revised periodically.

Table of Contents

18)Chapter eighteen: Notable changes since April 2022, and what the future holds for near neighbors of indoor residential wood burners whose wood smoke enters their yards and sickens them.

19)Chapter nineteen: Economic incentives to replace wood burning with Heat Pumps that work down to 40 degrees below zero.
20)Chapter twenty: How countries around the world can or will be able to replace indoor residential wood burning with truly clean energy sources.
Part 2. Extreme Circumstances. Look at extreme circumstances from the perspective of near neighbors of the air pollution, in order to put the threat to near neighbors in perspective and in order to allow room to consider solutions rather than only placating the air polluters.
21)Chapter 21: Wartime privation indoor residential wood burning. The example of Ukraine. First, do not send indoor residential wood burning appliances to Ukraine. Adding unnecessary air pollution to Ukraine is not a solution to their energy problems. Rebuilding bombed electrical infrastructure is the solution. Providing clean energy sources of home heating and home cooking is the solution. This could come in the form of solar stoves, electric stoves, or Heat Pumps that work down to 40 degrees below zero.
22)Chapter 22: Homeless privation indoor residential wood burning. The example of Phoenix, Arizona. One of the main problems of near neighbors of homeless encampments was air pollution from wood burning by the homeless. It also follows that the homeless who burn wood themselves suffer from ill health and early death because of the air pollution from wood burning.
23)Chapter 23: Terrorists using wood burning to control subject populations. The example of Haiti. Solid fuel burning in the form of tire, car and wood burning was used in 2023 and 2024 as a method of controlling populations or causing populations to flee Haiti and leave Haiti in the hands of terrorists.
24)Chapter 24: Natural gas suggested as a power source to be used up to 30 years from now, until 2055, rather than looking at natural gas as a temporary bridge to the truly clean energy of wind, solar and geothermal. The scenario of using natural gas for home heating and home cooking until 2055 was suggested by an article in the Washington Examiner, a conservative newspaper, by a conservative columnist. This suggestion was not practical because although natural gas emits one 450th of the PM2.5 as wood burning, natural gas also has other noxious emissions, so burning natural gas is not truly clean energy. Use the bridge as a temporary bridge that it is meant to be.
25)Chapter 25: Nuclear power plant destruction, with release of nuclear radiation, was recently threatened by Russia as one of their tools of war against Ukraine. Nuclear power plants have been suggested or threatened as the only alternative to indoor residential wood burning.
26)Chapter 26: Indigence. Economic problems can be solved by government aid. Looking at the income of people who claim to be indigent is the first way to solve this problem. If a person is truly indigent, Heat Pumps rebates are available for up to $8,000 in 2024 based on a sliding income scale.
Main Content.
0)Preface.
Why is this book length essay written? Residents Against Wood Smoke Emission Particulates are near neighbors of indoor residential wood burners who are sickened by indoor residential wood burning PM2.5 emissions entering the near neighbors' yards and sickening them. The near neighbors are attempting to have the PM2.5 monitor data they collect with their own PurpleAir PM2.5 monitors hanging from the eaves of the near neighbors' houses used to show that Environmental Protection Agency National Ambient Air Quality (EPA NAAQS) PM2.5 levels in the air are above "safe" levels of 35 micrograms per cubic meter in a 24-hour period, above 9 micrograms per cubic meter annually, or to show PM2.5 in their yards above "safe" levels according to the World Health Organization of 5 micrograms per cubic meter annually. I began writing news summaries with my comments as a member of Residents Against Wood Smoke Emission Particulates in April 2022 based on Google Alerts I received daily in my email about wood smoke, PM2.5, wood burning, et cetera. There were many issues that arose from covering news about indoor residential wood burning PM2.5 particulate air pollution. There are related air pollution issues with wood burning in industrial plants around the world. There are related air pollution issues with

outdoor wood burning. There are related air pollution issues with wood burning on beaches, and at campsites. There are related air pollution issues with wildfires which are primarily wood burning fires, most dramatically highlighted by Canadian wildfire wood smoke pollution incursions into the United States in 2023, shutting down some airports, and calling for one of the first United States widespread public health emergencies called around wood smoke pollution. The advice in many parts of the United States in June 2023 was to stay inside your sealed home with multiple air purifiers running. That is how near neighbors have lived their lives in order to cope with being hyper-localized next to an indoor residential wood burner, and it is not a solution to the problems that wood smoke pollution causes both to human health and to hastening climate change. I would like to break down the issues around wood burning air pollution into serviceable chapters so that the average person not yet familiar with the issue could, if they read this book, know a large chunk of what the near neighbor of an indoor residential wood burner has had to learn in order to effectively advocate for shutting down of indoor residential wood burning that threatens the near neighbor's health and life, threatens the near neighbor's communities, and threatens to hasten climate change.

Chapter zero: Overview of Table of Contents and Definition of Terms, related Websites and latest comment to the WHEJAC.

Definition of Terms:

Wood burning emits 90% 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. Wood burning emits 2.8 times the PM2.5 as the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 as the fossil fuel natural gas burning. These statistics comparing wood burning with fossil fuel burning are based on testing of the EcoDesign Stove in the United Kingdom, the cleanest burning wood burning appliance in the United Kingdom. Other indoor wood burning appliances such as fireplaces emit more PM2.5 particulate matter.

Related Websites: Residents Against Wood Smoke Emission Particulates is a 501c3 nonprofit organization. The Substack page is found at https://lindakarr.substack.com/ The Youtube Videos are found at https://www.youtube.com/@rawsepresidents4370/videos The Wordpress website is found at https://rawsepresidents.com/ The Spotify podcast is found at https://open.spotify.com/show/4Jk1ucPfFiCsTHdDRgTiQm The Facebook page is found at https://www.facebook.com/profile.php?id=100083475303577 The Tiktok page is found at https://www.tiktok.com/@rawsepresidents

Latest RAWSEP Comment to WHEJAC

Linda Karr of RAWSEP comment to WHEJAC 6/17/2024. 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 980 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 I 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. 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 burning 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 the 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.