

Episode 56iH September 3, 2023. A table at a Farmer's Market discussing wood burning pollution.

Some Observations at a Table at a Farmer's Market discussing wood burning pollution. 1) Even the most knowledgeable people don't know that when considering CLIMATE GOALS 1a) When wood burning replaces coal burning, harmful emissions go up, since wood burning emits more CO₂ and PM_{2.5} than coal burning & 1b) wood burning emissions are not counted toward Climate Goals of any participating country, but coal burning emissions are counted toward all participating countries Climate Goals. This means that when wood burning replaces coal burning it appears on paper that a participating country is closer to meeting Climate Goals and closer to slowing climate change. But this is an illusion, a lie if you will, and the participating country is farther away from slowing climate change, in reality, by replacing coal burning with wood burning.

2) Even the most knowledgeable people don't know that when considering United States Biomass Wood Burning Plant Emissions and Cost to Taxpayers 2a) When wood burning replaces coal burning, harmful emissions go up, since wood burning emits more CO₂ and PM_{2.5} than coal burning & 2b) wood burning emissions are costing taxpayers because wood burning is not efficient in producing energy and the logistics of obtaining wood and transporting it to wood burning plants are expensive, and the taxpayer subsidies for (failed) research attempting carbon capture of wood burning plants are expensive. 2c) This means that when "natural" wood burning replaces coal burning it appears to the man or woman on the street that a participating country like the United States is closer to meeting Climate Goals and closer to slowing climate change. But this is an illusion, a lie if you will, and the participating country the United States is farther away from slowing climate change, in reality, by replacing coal burning with wood burning. 2d) This also means the United States taxpayers are paying more for biomass wood burning energy plants than the taxpayer did for coal burning energy plants. At least with coal burning there were not taxpayer subsidies for wood burning plants, although there have been taxpayer subsidies for coal burning carbon capture attempts as well as wood burning carbon capture attempts over the years. 2e) The man or woman on the street does not know that even a Republican Governor, Chris Sununu of New Hampshire in the last month vetoed continued taxpayer subsidies of a wood burning power plant, because of cost (rather than on the grounds of protecting human health, although that protecting human health argument is made by Residents Against Wood Smoke Emission Particulates).

3) Even the most knowledgeable people don't know that when considering United States Indoor Residential Wood Burning Stoves there are 3a) harmful emissions, there are 3b1) carbon capture research subsidy costs 3b2) healthcare costs, and there is 3c) increased antibiotic resistance, and 3d) wood stove certification still allows for manufacture and sale of highly polluting indoor residential wood stoves. 3a) When wood burning replaces coal burning, harmful emissions go up, since wood burning emits more CO₂ and PM_{2.5} than coal burning, and when wood burning replaces natural gas, harmful emissions go up, since wood burning emits 450 times the PM_{2.5} than natural gas burning does & 3b1) wood burning emissions are costing taxpayers because wood burning is not efficient in producing energy, and the logistics of obtaining wood and transporting it to someone's wood burning stove are expensive, and the taxpayer subsidies for (failed) research attempts at carbon capture from wood burning stoves are expensive, and don't work, and are not implemented. Innovations in wood stoves since 1988, when wood stove certification began, are not effective in containing wood burning pollution, so wood stoves today are as polluting as those sold in 1988. 3b2) Indoor residential wood burning also means United States citizens are paying more for healthcare because wood stove emissions are 90% PM_{2.5} 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 3c) The man or woman on the street does not know that in the last month a study came out concluding that PM_{2.5} is a vector of antibiotic resistance. That means that during a pandemic like the viral pandemic of COVID 19, when bacterial infections often follow the viral infection, those bacterial infections cannot be effectively fought with bacterial antibiotics if PM_{2.5} makes that bacterial antibiotic ineffective. Bacterial infections which cause deaths

after COVID 19 infection could more likely run rampant in the presence of PM2.5 from wood burning emissions. 3d) Wood burning stoves sold in 2023 are as polluting as those sold in 1988 because any pollution control devices that could be effective are not used because there are giant loopholes in compliance with even the Environmental Protection Agency's lax wood stove certification standards for wood stove manufacture. These loopholes to compliance were pushed by the wood stove industry, as detailed in a report by the Office of the Inspector General (O I G) in February 2023 stating that most wood stoves sold today are highly polluting with CO2 and PM2.5 This means that when wood burning is done it appears to the man or woman on the street that wood stove certification means wood stoves are non-polluting to some extent, because no one has heard of the O I G report. But this wood stove certification is an illusion, a lie if you will, and the United States is farther away from slowing climate change, in reality, by offering to certify certain wood stoves as "safe".

4)Even the most knowledgeable people don't know that when considering United States Wood Burning Stoves there are harmful emissions, because compliance with United States Environmental Protection Agency (E P A) New Source Performance Standards (NSPS) for PM2.5 for indoor residential wood stoves, even if the standards protected human health, are not being complied with because of giant loopholes to compliance pushed by the wood stove industry. Either it is 4a)impossible to comply because all solid fuels emit harmful levels of PM2.5 or it is 4b)inconvenient and costly to comply because carbon capture technologies are designed for expensive, sophisticated biomass wood burning plant emissions, not for indoor residential wood stoves.

5)Even the most knowledgeable people don't know that Assistant Attorney Generals from 10 U S states will commence to sue the E P A this fall if the E P A does not update it's NSPS every 8 years as required by law. The last time the EPA updated it's NSPS was in 2015, so 2023 is the 8 year deadline for updating NSPS. In 2020 the NSPS for a wood stove was 2 grams per hour for a wood stove burning cord wood.

6)Even the most knowledgeable people don't know that even with a wood stove emitting only 2 grams per hour of PM2.5, those emissions would violate the EPA's own National Ambient Air Quality Standards (NAAQS) which are 35 micrograms per cubic meter in 2023, in the yards of near neighbors 10 feet away from the stack, or in the yards of near neighbors 60 feet away from the stack.

7)Even the most knowledgeable people don't know that a PurpleAir resident-owned PM2.5 monitor hanging from the eaves of a near neighbor of an indoor residential wood burner whose stack is 10 or 60 feet away, such as in a typical suburban or city yard, registers violation of NAAQS limits on a regular basis.

8)Even the most knowledgeable people don't know that \$249 PurpleAir PM2.5 laser monitors, which give results every 10 minutes, are put on U S E P A Airnow Maps of Smoke and Fire, alongside \$100,000 E P A monitors, which weigh PM2.5 of densities called "wood" or "gravel" and give results every hour, are correlated to those E P A monitors with a simple mathematical formula and both monitors serve to inform the public of the PM2.5 Air Quality in their areas, such as during the recent incursions of Canadian Wildfire Smoke into areas of the United States. When they hear this, most people comment that there aren't enough PM2.5 monitors on the map to inform the public of air quality.

9)Even the most knowledgeable people don't know that PurpleAir PM2.5 monitor can pinpoint the source of PM2.5 pollution only hyper-locally, and most E P A monitors are located near industrial facilities to monitor industrial emissions are not located in residential areas where indoor residential wood stoves are employed. Therefore indoor residential wood burning emissions are largely overlooked in government statistics.

10)Even the most knowledgeable people don't know that there is a Residents Against Wood Smoke Emission Particulates proposal to the 10 Assistant Attorney Generals that will commence to sue the EPA, a proposal that the 10 Assistant Attorney Generals propose a "Parallel Track" to the E P A of 10a)lawsuit to make the E P A lower it's PM2.5 limits every 8 years, as required and 10b)lawsuit asking the E P A to hand out PurpleAir PM2.5 monitors to any near neighbor of an indoor residential wood burner who

complains of PM2.5 from the wood burning entering the near neighbor yard and infiltrating their home, requiring continuous use of air purifiers in order to breathe clean air in their homes. The near neighbor would then not have to choose between 10a)an ineffective wood stove certification system that allows wood stove pollution, a certification system that may never disappear, and 10b)an effective way to control air pollution affecting near neighbors' health and lives.

11)Even the most knowledgeable people don't know that in 1989 Dr. Anthony Fauci proposed a "Parallel Track" of 11a)use of AZT in an AIDS clinical trial and 11b)"parallel" use of the AIDS drug Ganciclovir to combat the blindness that was a side effect of AZT. This combination of drugs allowed parallel use of AZT to control AIDS and use of Ganciclovir to control blindness. The AIDS patient did not have to choose between dying and blindness, but both conditions could be controlled using the two drugs in combination.

12)Even the most knowledgeable people don't know that on the RAWSEPresidents website <https://rawsepresidents.wordpress.com> there are template letters you could send to the U S Assistant Attorney Generals who may commence to sue the E PA and there are template letters you could upload and send to the successor of Dr. Anthony Fauci at National Institute of Allergy and Infectious Disease (NIAID) Dr. Jeanne Marrazzo and two of her colleagues at the National Institutes of Health (NIH) asking for a parallel track allowing handout of PurpleAir PM2.5 monitors to near neighbors of indoor residential wood burners, to combat the human health effects of PM2.5 from indoor residential wood burning. Or, knowing what you know now, you could compose your own letter to all 13 of the Assistant Attorney Generals and 3 NIH officials, and send one letter to all 16 people, one knowledgeable person to other knowledgeable people.

Here are their emails

cody.doig@alaska.gov Alaska Senior Assistant Attorney General Cody Doig

Jason.james@ilag.gov Illinois Assistant Attorney General Jason James

Sgoldstein@oag.state.md.us Maryland Special Assistant Attorney General Steven Goldstein

Turner.Smith@mass.gov Massachusetts Assistant Attorney General Turner Smith

Peter.Surdo@ag.state.mn.us Minnesota Special Assistant Attorney General Peter Surdo

Lisa.Morelli@law.njoag.gov New Jersey Deputy Attorney General Lisa Morelli

Nicholas.Buttino@ag.ny.gov New York Assistant Attorney General Nicholas Buttino

Paul.Garrahan@doj.state.or.us Oregon Attorney-in-Charge Paul Garrahan

Steve.Novick@doj.state.or.us Oregon Special Assistant Attorney General Steve Novick

Nick.persampieri@vermont.gov Vermont Assistant Attorney General Nick Persampieri

Caroline.cress@atg.wa.gov Washington Assistant Attorney General Caroline Cress

Chris.reitz@atg.wa.gov Washington Assistant Attorney General Chris Reitz

Jenniferd@psc Cleanair.gov General Counsel, Puget Sound Clean Air Agency Jennifer A. Dold

Jeanne.marrazzo@nih.gov Director of National Institute of Allergy and Infectious Diseases Jeanne Marrazzo

Hugh.Auchincloss@nih.gov January to July 2023 acting Director of National Institute of Allergy and Infectious Diseases Hugh Auchincloss

Lawrence.Tabak@nih.gov Director of the National Institutes of Health Lawrence Tabak

September 2, 2023 News

[Health burden of air pollution found to differ across racial groups - Medical Xpress](#)

Medical Xpress

Fine particulate matter, also known as PM2.5, consists of particles or droplets smaller than 2.5 micrometers in diameter, or 30 times smaller than the ...

[Reversal of trends in global fine particulate matter air pollution | Nature Communications](#)

Nature

Ambient fine particulate matter (PM2.5) is the world's leading environmental health risk factor. Quantification is needed of regional ...

Idaho, Bonner County

[Fire restrictions lowered to Phase I in time for weekend | Bonner County Daily Bee](#)

Bonner County Daily Bee

Portable charcoal grills and wood-burning stoves will remain off-limits during Stage I restrictions at the aforementioned parks.