

Episode 56XL September 4, 2024. Things are going Draxstically wrong. Stop burning trees.

In Episode 56XL 1 World 2 United States 3 Georgia 4 Minnesota 5 Mississippi 6 United Kingdom 7 Wales 8 Ukraine 9 Albania 10 Ghana 11 India 12 PM2.5 and human health. Main Content. 1 World. Wildfire Recovery: Essential Health and Air Quality Precautions During a Crisis. Benzinga The World Health Organization recommends that the average concentration of PM 2.5 particles should not exceed 15 micrograms per cubic meter 2A United States. The New York Times Climate Forward Newsletter. Climate: My heat pump adventure. **RAWSEP View** The author of this article is from Washington DC where there were no Heat Pump rebates yet in July 2024. In Wisconsin in September 2024 Heat Pump Rebates of up to \$8000 based on a sliding income scale will become available. The author in DC may not qualify for a full rebate of \$8000 which in Madison Wisconsin in September 2024 for a family of four would be a median income of \$97800. Heat Pump rebates of up to \$8000 based on a sliding income scale will be available at Focus on Energy in Wisconsin including in the capital city of Madison Wisconsin in September 2024 <https://focusonenergy.com/residential/heating-and-cooling> 80% of median Madison income is \$97800 for a family of 4 and 80% of median Madison income qualifies residents for up to an \$8000 rebate on Heat Pumps that work down to 40 degrees below zero (Fahrenheit and Centigrade Temperature scales briefly converge at 40 degrees below zero). Costs for Heat Pumps and their installation may not be as high in the Midwest as on the East Coast. If there are existing usable vents no venting cost may be required. This article below seems to be a description of a worst case scenario for obtaining a Heat Pump before District Rebates of up to \$8000 were available in Washington DC. RAWSEP concedes that paying for venting where none previously existed adds to the cost of a Heat Pump. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization.** September 3 2024. The 2022 Inflation Reduction Act offers tax credits worth up to \$2000 to switch to a home heat pump. Reporting from my furnace room. thanks to the tax credits passed by Congress in 2022 Heat Pumps are more affordable than ever. What's not to love? in my house in Washington D.C. in July 2024 My HVAC system failed and it would cost thousands of dollars to fix. Maybe this was my chance to get a heat pump. As one expert put it the devices are so efficient that they're "like magic." Making the switch. A new gas-powered furnace plus A.C. would start at about \$12000 from a reputable-seeming company. A heat pump would be more: anywhere from \$14500 to \$20000. A week after we lost our A.C. my wife and I became the owners of a heat pump made in Mexico by an American company called Lennox International. It consists of a box that sits outside the house and another box inside. The price was \$14540. Holes in our basement walls were cut by the installation team to run wires from the electrical panel to the furnace room. Fixing those holes added another \$500 or so to the cost of the project. our heat pump is louder than our old HVAC system. The maze of subsidies. The 2022 Inflation Reduction Act offers tax credits worth up to \$2000 provided your heat pump meets a certain threshold for energy efficiency. The law also offers states money for their own subsidies but the District of Columbia has yet to set up its program. D.C. also has separate ratepayer-funded heat pump rebates which predate the 2022 law and came to about \$350 in my case. If I had bought a more efficient model that D.C. rebate would have been twice as high. But the salesman didn't tell me that and in my haste I didn't think to ask. Those subsidies should make my heat pump not much more expensive than a traditional HVAC system. Even if there were no subsidies after four to five years that extra cost is likely to be outweighed by the accumulated savings on our utility bills. The median cost in Washington is about \$18000. the tax credit is unlikely to be reversed because voters would complain too much. Almost half a million U.S. households claimed a tax credit last year for installing heat pumps. "There were more heat pumps sold last year than fossil-fuel furnaces for the second year in a row" an expert said. Mostly the small changes lead to bigger ones. "I think you did a really consequential thing" 2B United States. The New York Times Climate Forward Newsletter. An aerial view of wind turbine blades cut into sections in a landfill. Turbine Blades Have Piled Up in Landfills. A Solution May Be Coming. Wind power has a waste problem that has been difficult to solve. Turbine blades made from a new plant-based material could make them recyclable.



Anti-Drax protesters gathered outside Fulford police station in York to await the release of people who had been arrested. Photograph: Gary Calton/The Observer

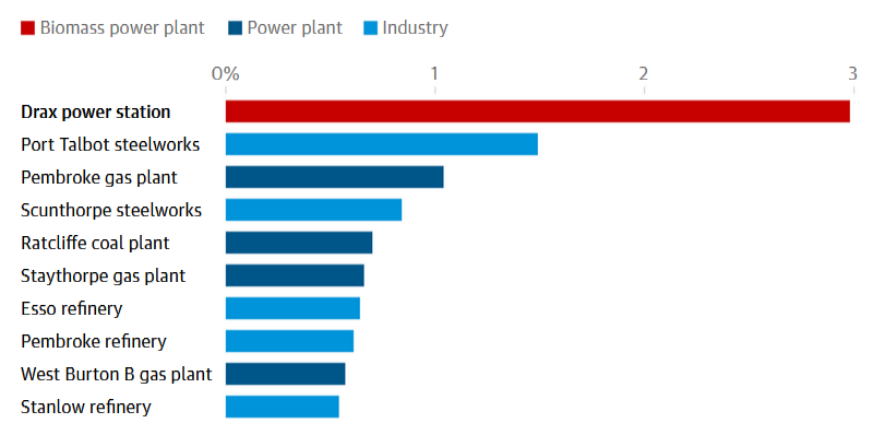
3 Georgia. Georgia Power biomass projects spark opposition. The Augusta Chronicle. Georgia Power seeks PSC approval to build plants that burn wood pellets other biomass. Capitol Beat News Service. The Georgia Public Service Commission is set to vote September 17 2024 on Georgia Power’s proposal to burn wood pellets and other organic materials to generate energy and has raised environmental concerns and high costs being passed on to customers. **RAWSEP Favorite Excerpts** from this article. First favorite excerpt. Georgia Power officials who testified Thursday conceded biomass is significantly more expensive than other sources of energy generation in the utility’s arsenal. “Biomass is not the least expensive resource” said the director of resource planning for Georgia Power. “I think everyone knows that.” And second favorite excerpt “Burning wood pellets releases more greenhouse gas emissions per unit of energy than burning fossil fuels like gas oil or even coal accelerating climate change” the North Carolina-based organization Dogwood Alliance writes on its website. “We need to use low-carbon technologies like solar and wind to produce energy not wood pellets or fossil fuels.”

RAWSEP View The two main arguments made by the wood burning Georgia energy suppliers Altamaha and International Paper is that wood burning is available under emergency conditions and that the wood used for burning is grown in Georgia. **RAWSEP View** The Southern Environmental Law representative questioned the reliability of biomass. She said Georgia Power had 330 megawatts of biomass in its system when Winter Storm Elliott hit Georgia on Christmas Eve 2022 setting record-low temperatures in many areas. However 267 of those megawatts were unavailable she said. “Biomass didn’t perform very well during Winter Storm Elliott” she said.

RAWSEP View The argument cannot be made that burning wood is cheaper than clean energy alternatives such as wind and solar. “Customers will be paying for more than three times the value of the energy they will be receiving” said a lawyer for the Atlanta-based Southern Environmental Law Center which represents the environmental group Georgia Interfaith Power and Light in the case. **RAWSEP View** Environmental groups argue burning biomass spews harmful pollution into the atmosphere. The arguments made by Georgia Power are that wood burning will create jobs in Georgia and that wood burning will provide a market for the forestry industry from which to make profits. The cost of medical bills of those exposed to PM2.5 emissions from wood burning is not considered in this article. The use of the term renewable for wood burning ignores that there are truly clean renewable alternatives to wood burning such as wind solar and geothermal energy sources which also produce cheaper energy to consumers in 2024. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization.** September 2 2024. An energy supply resource generally considered renewable and in plentiful supply in Georgia is running into opposition from environmental groups. Atlanta-based Georgia Power is seeking approval from the state Public Service Commission (PSC) to build three plants in South Georgia that would generate about 80 megawatts of electricity by burning wood pellets and other forms of biomass. Most of that power 70 megawatts would come through a 30-year power-purchasing agreement (PPA) with Altamaha Green Energy LLC which operates a mill in Wayne County. Two other 10-year PPAs with International Paper Co. would yield the rest of the biomass from mills in Port Wentworth and Macon County. Georgia Power officials are pitching the proposal as a way to create jobs in rural parts of the state and give a forestry industry with an oversupply of trees another market for Georgia timber. The Director of Resource Planning for Georgia Power said finding the least expensive way to generate electricity wasn’t the point of the Request for Proposals which Georgia Power put out for the biomass projects. “The cost doesn’t take into account the economic development and forestry support aspects” he said. The PSC’s Public Interest Advocacy Staff has recommended that the commission certify the three biomass projects based both on the economic benefits they would bring to the forestry industry and the benefits of diversifying Georgia Power’s energy generation mix. The

Drax biomass power station is the UK’s top CO2 emitter

% of total UK emissions in 2023, top 10 emitters shown



Guardian graphic. Source: UK Emissions Trading Scheme 2024 compliance reporting data, Drax 2023 annual report



commission is scheduled to hold a final hearing on the projects Sept. 12 and vote on them Sept. 17, 2024. 4A Minnesota. Canadian wildfire smoke prompts air quality alert in north central MN - KARE 11 To help reduce the number of harmful particles in the air MPCA recommends limiting activities like outdoor burning and use of wood-burning stoves at 4B Minnesota. Air quality alert issued due to wildfire smoke - Brainerd Dispatch Reduce or eliminate activities that contribute to air pollution such as outdoor burning and use of residential wood burning devices. Reduce 5 Mississippi. Residents say South MS neighborhood smelled of smoke for months. Then a wildfire erupted Biloxi Sun Herald Another fire north of Old Fort Bayou Road and across from the Espana Woods subdivision burned 25 acres and threatened several more properties. Flames 6A United Kingdom and North Carolina. Green groups urge Ed Miliband to scrap Drax subsidies. Open letter to Labour energy secretary from 41 groups says wood-burning biomass plants are putting forests and biodiversity at risk. **RAWSEP favorite excerpt** from this article. Protesters outside Fulford police station: their placards and banners have messages including Forests are not Fuel Axe Drax not Trees **Things are Going Draxtically Wrong** Stop Burning Trees and Subsidize Real Renewables. Anti-Drax protesters gathered outside Fulford police station in York to await the release of people who had been arrested. **RAWSEP View** It is not enough to fine wood burning plant Drax 33 million US dollars for using precious wood rather than ordinary wood to burn in its power plant. Ordinary wood and precious wood both emit 2.8 times the PM2.5 and CO2 when that wood is burned as the fossil fuel coal burning. Ordinary wood and precious wood both emit 450 times the PM2.5 as the fossil fuel natural gas burning. These statistics come from testing the cleanest burning wood stove in the United Kingdom the EcoDesign wood stove. A recent Ember study found that current wood burning at the UK Drax power plant emits 4 times the PM2.5 as the Drax coal burning power plant at that same site did when Drax used the power plant for coal burning instead of wood burning. 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. If the focus is on human health the need to stop wood burning and use clean alternatives for home heating and cooking is clear. The concern of Drax is with profits and since wood burning makes no commercial sense and wind and solar power are cheaper to produce than wood burning power what keeps Drax aloft are UK government subsidies. The UK government should stop those government subsidies and instead use UK government resources to develop more wind and solar which are the truly clean renewable sources of energy. This article names some of the more than 40 groups who are advocating for the end of wood burning by the Drax power plant. They are opposed by billionaire Drax investor Daniel Křetínský. The advocates for stopping wood burning are from the United States Canada Latvia Estonia and Portugal. A second issue covered in this article is that what green groups called “an unreasonable restriction of free speech”. **RAWSEP View** Unfortunately a UK government spokesperson referred to the scientifically debunked theory and excuse for wood burning of Carbon Neutrality of Wood Burning to state that wood burning emissions can be legally erased from emissions from other sources used to prove on paper that a nation is meeting its climate goals. This erasure of information is allowed under an international agreement on Climate Goals and such an erasure on paper takes us closer not farther away from Climate Change in reality. In reality wood burning is not a low carbon and is not a no carbon source of energy. Wood burning is a high carbon source of energy. From the article. A government spokesperson said: “The Intergovernmental Panel for Climate Change defines biomass sourced in line with strict sustainability criteria as a low carbon source of energy. We will continue to monitor biomass electricity generation to ensure it meets required standards.” Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization. The Guardian. August 27 2024. More than 40 green groups have called on Ed Miliband to scrap plans to pay billions in subsidies to the Drax power plant in reen campaigners in the UK accused Drax of using the police as “private security” for the power plant. Police arrested 25 people in



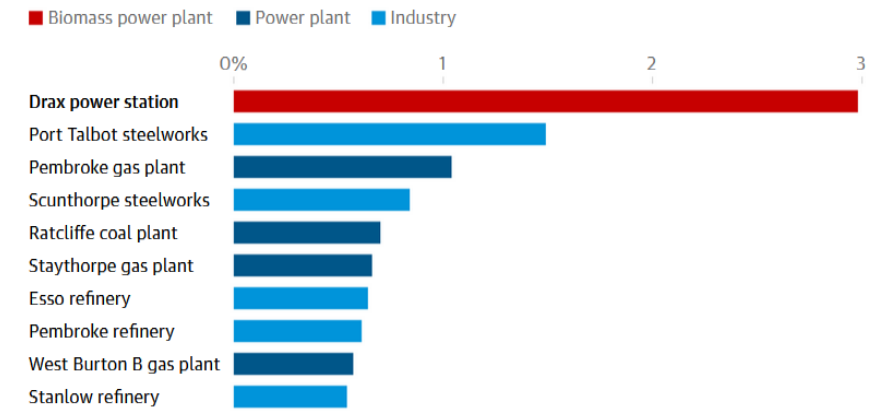
Anti-Drax protesters gathered outside Fulford police station in York to await the release of people who had been arrested. Photograph: Gary Calton/The Observer

North Yorkshire for it to keep burning wood pellets imported from overseas forests. In an open letter to the energy secretary 41 groups from across Europe and the US say they are “deeply concerned” about the UK government’s plans to foot the cost of extending the subsidy scheme which supports the UK’s most polluting power plant from 2027 until the end of the decade. The subsidy scheme which has paid the FTSE 250 owners of Drax more than £7bn since 2012 also supports the Lynemouth biomass plant in Northumberland which is owned by the billionaire investor Daniel Křetínský. “These power stations are burning trees from some of the world’s most biodiverse forests in the southern USA Canada and Europe with devastating impacts on communities wildlife and the climate. This puts at risk forests and wildlife in many of our countries” the letter says. “We urge [Miliband] not to grant any new subsidies to wood-burning power stations in the UK” it adds. The letter was signed by green groups from the US Canada Latvia Estonia and Portugal all countries that supplied the nearly 6m tons of wood pellets imported by the UK in 2023 amid growing concern over the environmental impact of felling trees for biomass.. Adam Colette a campaigner with the Dogwood Alliance based in North Carolina in the US said: “Our hope is that a new administration sees the impacts that come from false solutions which harm the people and environment in the southern US and stop subsidizing planet destroying companies.” The Department for Energy Security and Net Zero has been approached for comment. Drax has won the support of the UK government thanks to its claim that its electricity is “carbon neutral” because the trees that are felled to produce wood pellets absorb as much carbon dioxide while they grow as they emit when they are burned in the power plant. Analysis published earlier this month by the climate thinktank Ember found that Drax was Britain’s largest carbon emitter last year after its chimneys released 11.5m tons of CO2 or nearly 3% of the UK’s total carbon emissions. The company plans to fit carbon-capture technology at the site using more subsidies to create a “bioenergy with carbon capture and storage” (Beccs) project that it claims would be the first “carbon-negative” power plant in the world by the end of the decade. The claims have been disputed by experts. More than 500 scientists signed a letter in 2021 warning that burning wood pellets would create a “carbon debt” that would not be paid off by the growth of new trees for decades. “Regrowing trees and displacement of fossil fuels may eventually pay off this carbon debt but regrowth takes time the world does not have to solve climate change. As numerous studies have shown this burning of wood will increase warming for decades to centuries. That is true even when the wood replaces coal oil or natural gas” the letter said. 6B United Kingdom.

RAWSEP View Wood burning PM2.5 emissions as a threat to human health and hastening climate change are not mentioned in this article. The article looks at the economic angle. The author of this article pessimistically views the 33 million US dollar fine on Drax for using the wrong form of wood and covering up the fact as a mere slap on the wrist and diversion from the fact that Drax will continue to burn wood if it burns the right kind of wood in the future. The subsidies will continue unless a sanction of Drax is not a diversion from the fact that the underlying contract to burn wood is unbroken between UK and Drax. The extreme logistics of shipping wood from Canada to the UK are termed by this author to be bizarre. The author mildly states that at this point one would like to see properly costed clean alternatives. From the article After wood pellet reporting failures it’s time for a proper review of Drax’s subsidies. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization.** The Guardian. August 30 2024. A finding that you submitted dodgy data to the regulator on where your wood pellets come from sounds like very bad news if like the biomass power generator Drax you are the lucky recipient of £500mplus of subsidies every year and are trying to keep the handouts flowing beyond their scheduled end date of 2027. But shares in Drax did not collapse on Thursday. City analysts judged that the end of Ofgem’s investigation represented an excellent development for the company for the chances of getting a new contract with

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% of total UK emissions in 2023, top 10 emitters shown



Guardian graphic. Source: UK Emissions Trading Scheme 2024 compliance reporting data, Drax 2023 annual report

the government. Drax to pay £25m after regulator finds wood pellet reporting failures. Why? Well Ofgem's conclusion contained the **critical words "technical in nature"** to describe the reporting failures from a Drax forestry operation in Canada. The regulator also said it did not find evidence to question the sustainability of Drax's biomass. And the bad data "would not have impacted the level of subsidy Drax received under the RO [renewable obligations] scheme". Thus **a £25m penalty a mere 1% of Drax's stock** market value is almost irrelevant. The company will also have to pay for an external audit of its wood pellet supply chain to prove the accuracy of its future reporting but that's not an onerous condition. Is Drax now looking good for those 2027 to 2030 subsidies the ones that would tide it over so that it can pursue the bigger prize of yet more subsidies to install carbon capture technology at its North Yorkshire plant that generates 4% to 5% of the UK's electricity? Well **before Drax is promised a penny extra from billpayers Ed Miliband the energy secretary should commission a properly independent review of the business model of burning wood pellets to generate electricity.** It should cover both the environmental impact and the stupendous subsidies. the wood and sawdust is collected in places as far away as Canada and the southern US it is then shipped across the Atlantic expensively you have to ensure the stuff doesn't ignite on route then it is burned in the UK where according to a critical report from the climate thinktank Ember **it accounted for nearly 3% of the country's carbon emissions last year.** The company's defense is also well known by now the electricity counts as **"carbon neutral"** because the trees that are felled absorb as much carbon dioxide while they grow as they emit when they are burned. the **Intergovernmental Panel on Climate Change backs the process as long as the biomass is sourced sustainably** as Drax regularly points out. the elaborate international supply chain required to get pellets to Yorkshire seems to **defy common sense.** But the subsidies an estimated £7bn for Drax since 2012 to get it off coal and into biomass are something else. The plant's advantage is that biomass is a source of **dispatchable generation the energy is always there when you need it.** one would like to see **properly costed clean alternatives.** The expense of supporting Drax's **bizarre operation** looks extreme. On the face of it the company if it wants to pursue the next generation game of burying its carbon output under the North Sea should be told to pay its own way in the interim. Subsidies for 2027 to 2030 look hard to justify. If Miliband disagrees let him explain the arithmetic of how bills will be lowered. 6C United Kingdom Cornwall. Grieving mum demands Keir Starmer take action on wood-burning stoves. **RAWSEP View** This article looks at the human cost to health and lives of wood burning. The group letter here is signed by health professionals. RAWSEP favorite excerpt from this article In the letter to the prime minister the group of health professionals urged the government to do more to reduce air pollution. It is estimated to cause 38000 premature deaths a year. More than 160 GPs pediatricians nurses midwives and others from institutions across the UK from Great Ormond Street Hospital to the Great North Children's Hospital warned that "current scientific literature attributes an alarming proportion of illnesses to dirty air". Air pollution has been linked to a range of heart and lung problems including asthma and stunted development of children's lungs. "The role of air pollution in strokes and dementia is now well established" they added. **RAWSEP View** The health professional letter is supported by Ride for Their Lives and the mother of Ella Kissi Debrah. Middle Class not Low Income use of wood stoves in the UK is driving the rise of air pollution from wood burning so wood burning here is exposed as unnecessary economically. From the article headline A group of health professionals has urged Keir Starmer to do more to reduce air pollution and their call has been backed by Rosamund Kissi-Debrah whose daughter Ella's death was linked to it. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization.** Cornwall Live. August 23, 2024. A mother whose young daughter's death was linked to air pollution has urged the Prime Minister to act over wood-burning stoves. Ella Kissi-Debrah aged nine became the first person in the UK to have air pollution recognized as a factor in her death in a 2021 coroner's report. More than 100 senior doctors have published a warning over the "alarming" health impacts of wood-burning stoves and urged Sir Keir Starmer to take



© Nine-year-old Ella Adoo-Kissi-Debrah, who died in 2013 was the first person to have air pollution as a cause of death

action. The medics cited Ella's tragic death and called it a "wake-up call to many of us regarding our lack of candor about the health damage from air pollution". Ella's mother Rosamund Kissi-Debrah welcomed the open letter to the PM saying: "Air pollution is an invisible killer you cannot see the damage it is doing to your body or to your children's bodies. I sincerely hope the prime minister will listen" Wood-burning stoves are Britain's biggest scourge of PM2.5 a particularly dangerous air pollutant. In 2021 domestic combustion accounted for 27 per cent of emissions of the particulate pollution more than that produced by cars. "Cost-effective quick wins include action on solid fuel burning in homes where there are reasonable alternatives" said the letter to Sir Keir organized and delivered by campaign group Ride for Their Lives. "Action could include the government educating people about the health risks of wood burners" said a representative of Ride for Their Lives. Around 150000 to 200000 wood stoves are sold in the UK each year and many health experts think curbing their emissions could be a comparatively easy way to boost air quality in urban areas. The rise in middle-class homes of installing wood burners or open fires as a lifestyle choice has led to hotspots of dirty air in parts of UK towns and cities. A study by researchers at Imperial College London found increased levels of PM2.5 due to solid fuel burning on residential streets in Islington. The UK Environment secretary has pledged he will deliver on the Environment Act which includes a goal for curbing PM2.5 pollution by 2040. 6D United Kingdom Gloucestershire. Wood burning stove owners warned as one in 10 are at risk. Gloucestershire Live. New research reveals 1 in 10 owners of wood burners and other solid fuel stoves leave it years before sweeping their chimneys putting their homes 6E United Kingdom Leicester. Winter Fuel Payment axe update as new plan put forward to reverse change Leicester Mercury Wood burning stove owners warned as one in 10 are at risk. 6F United Kingdom London. CIBSE calls for industry-wide adoption of enhanced fire safety standards Fire Safety Matters The London Fire Brigade sent 40 fire engines and 225 firefighters THATCHED ROOF buildings that are fitted with wood burning stoves are at risk. 6G United Kingdom. The New York Times Climate Forward Newsletter. Britain Awards 10 Contracts for Offshore Wind Projects. The successful outcome of the government auction for renewable energy projects may bolster a wind industry battered by rising costs. 7 Wales. Warning over chimney fires – mywelshpool Fuel burning appliances such as stoves fires boilers and water Wood Burning Stoves (mawwfire.gov.uk) · halls side banner · Welshpool High 8 Ukraine. Fires in Chernihiv region and Chernobyl smog spreads MSN smoke and the smell of burning in nearby areas according to the 9 Albania. According to the report air pollution exceeds the norms in several cities from Tirana to Korça CNA.al First the condition of dust particles (PM10 and PM 2.5) is analyzed. According to KMA based on the monitoring results we have exceeded the 10 Ghana. Smoke from wood fuel harmful to pregnant women use LPG. GBC Ghana Online The Sekyere South District Health Promotion Officer has stated that exposure to smoke poses significant health risks 11A India. It's been 5 years of the National Clean Air Programme. This is why it hasn't worked. Mongabay-India PM10 particles such as dust. The focus needs to be on the more harmful PM2.5 particles and that means addressing emissions from industry 11B India. IMD weather update: Check weather forecast for Delhi Mumbai Chennai & Kolkata Hindustan Times Relative humidity remains at a high of 77% while the air quality remains good with AQI PM 2.5 levels around 50. Kolkata. In West Bengal's capital 12A PM2.5 and blood pressure. Differing associations of PM2.5 exposure with systolic and diastolic blood pressures across Nature Environmental health research has suggested that fine particulate matter (PM2.5) exposure can lead to high blood pressures but it is unclear Environmental Risks Escalate Cardiovascular Disease Burden Experts Warn American Journal of Managed Care Further excessive exposure to particulate matter 2.5 (PM 2.5) and 10 (PM 10) can lead to endothelial cell damage that triggers hypertension and 12B PM2.5 and dementia. Air pollution: a latent key driving force of dementia BMC Public Health BioMed Central Studies strongly supported the negative effects of PM2.5 and then NO2 on the brain and the development of neurodegenerative disorders in old age. 12C PM2.5 and pregnant women. Smoke from wood fuel harmful to pregnant women Graphic Online The Sekyere South District Health Promotion Officer has stated that exposure to smoke poses significant health risks



Anti-Drax protesters gathered outside Fulford police station in York to await the release of people who had been arrested. Photograph: Gary Calton/The Observer