

Web 57DHYAFZZFLU April 14 2026 The most polluted countries in the world using PM 2 point 5 average

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Australia [23](#) United Kingdom [24](#) Europe [25](#) China [26](#) Laos [27](#) Thailand Main
Content

[0 RAWSEP View](#) What business would you go into if you had a million dollars as startup money? In 2026 would you buy into a bagel operation in Vermont which bakes bagels using a wood burning stove? In 2026 would you buy into a respirator distribution service for wildfire wood smoke firefighters in Australia? In 2026 Would you buy into a Heat Pump distribution operation that offers a clean alternative to indoor residential wood burning? In 2009 would you buy into a chicken grilling operation in Montreal Quebec Canada which grills chicken using a wood burning stove? Would you decide not to open a wood fired bagel operation because in 2026 you were aware of the adverse health effects of wood burning on the human lung and cardiovascular system? Those adverse effects of wood smoke were known in 2009 and more evidence has only piled up since then Food can be cooked more efficiently and without wood burning ash residue and smoke particles in the food that is in itself cancer causing if food is not cooked over a wood burning fire Seasoning with herbs and spices can appeal more to the human palate than ash from wood burning on and inside food If you pay attention to the news in 2026 you can see that near neighbors to wood burning have recently complained about wood smoke entering their residential yards and infiltrating their homes This Webisode brings back a Montreal Quebec story from 2009 and also includes a 2016 story from Vermont An article from Australia about wildfire firefighting points out that if you can smell wood smoke you are inhaling PM 2 point 5 which is a known carcinogen Birds in the wild exhibit escape behavior when noticing wood smoke Humans also note that smoke is harmful to their health but if it appears near or in their homes there is no escape except for the wood burner to stop burning wood Is baking or grilling over a wood burning fire so important that you would die in order to bake or grill that way? Is baking or grilling over a wood burning fire so important to you that you would let your near neighbors endure illness and early deaths as is statistically probable because you want to start a business using wood burning instead of clean alternatives that are abundantly available in 2016 and which were abundantly available in 2009? The business owners are not quoted about why they are doing what they are doing A lawsuit might require wood burning business owners to justify at least to the satisfaction of a jury of their peers why they are deliberately creating pollution even after being asked to stop repeatedly And stopping burning wood is the only way to stop the pollution since the business owners complain that carbon capture technology is prohibitively expensive for them It is true that Carbon Capture does not work and since it does not work the logical thing to do would be to stop burning wood Just as the logical thing to do would be the Federal Government to provide incentives for alternatives to indoor residential wood burning and provide incentives for alternatives to gas powered cars Our federal government has not blocked all incentives for the average person to buy clean energy entirely and a new incoming US administration in reaction to this clean energy desert may very well immediately reinstate strong clean energy incentives again If the near neighbors who do not have the

wherewithal to sue repeatedly for nuisance and so cannot stop you from polluting their and your own air for no reason you as a business owner should look into using your family inheritance or other money which gives you the idea you can pollute the air for a whim for a business that has a future under a government which will surely in the near future have regulation to stop unnecessary air pollution for the benefit of society as a whole and to ensure that air pollution does not shorten or end lives unnecessarily leading you to logically invest in better businesses which employ clean baking and grilling alternatives to wood burning

1A World PM 2 POINT 5 Global health benefits and cost effectiveness of indoor air purification to mitigate PM 2 POINT 5 from Nature Climate change is intensifying wildfire frequency and severity globally with wildfire related fine particulate matter fire PM 2 POINT 5 emerging as a

1B World PM 2 POINT 5 Global hotspots of compound extreme heat pollution linked to local surface and atmospheric Nature Extreme heat and particulate matter PM 2 POINT 5 pollution are among the deadliest environmental hazards that threaten humans and ecosystems World wood smoke IQ Air 2025 World Air Quality Report finds only 14 percent of cities meet WHO air pollution guideline IQ Air 5 concentrations and 18 seeing declines while winter wood burning summer smoke from Canadian wildfires and Saharan dust worsened seasonal pollution World PM 2 POINT 5 Ubiquitous data driven framework for traffic emission estimation and policy evaluation – Nature Quantifying urban traffic emission dynamics is critical for evaluating decarbonization policies yet existing models often lack resolution World PM 2 POINT 5 World Most Polluted Countries in 2025 PM 2 POINT 5 Ranking IQ Air PM 2 POINT 5 Data · Air Quality API · Air Quality App Learn Measure Air Quality · Improve Air Quality · Community Air Monitoring News Air

1C World heat pump OGCI publishes report on heat pump applications to improve energy efficiency in oil and gas Oil and Gas Climate Initiative The Oil and Gas Climate Initiative OGCI has published a new report exploring how heat pump technologies can improve energy efficiency across oil OGCI publishes report on heat pump applications to improve energy efficiency in oil and gas AI Overview The Oil and Gas Climate Initiative OGCI has published a report exploring how heat pump technologies can improve energy efficiency across oil and gas operations The report focuses on how heat pumps can capture and upgrade waste heat enabling it to be reused within industrial processes rather than lost It highlights the potential of heat pumps to deliver efficiency gains and emissions reductions across various applications including offshore heating crude stabilization processes and operations in remote or unconventional fields **The report aims to help companies identify where heat pump technologies can deliver efficiency gains and emissions reductions across their operations supporting the OGCI strategic focus on solutions to help decarbonize society** Wikipedia Entry The Oil and Gas Climate Initiative OGCI is an international industry led organization which includes 12 member companies from the oil and gas industry BP Chevron CNPC Eni Equinor ExxonMobil Occidental Petrobras Repsol Saudi Aramco Shell and TotalEnergies represent over 30 percent of global operated oil and gas production It was established in 2014 and has a mandate to work together to accelerate the reduction of greenhouse gas emissions in full support of the Paris Agreement and its aims

1D World Most Polluted Countries Image representing world 2025 AQI US Good 50
 Moderate 100 Poor 150 Unhealthy 200 Severe 300 Hazardous 301 plus Rank Country 2025 PM 2 point
 5 in micrograms per cubic meter Average January February March April May June July August
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2A United States heat pump As temperatures heat up it time to think about upgrading your HVAC
 Here how to do it right – MSN Homeowner posts honest heat pump review after two frigid winters The
 Cool Down Homeowner posts honest heat pump review after two frigid winters 25

2B United States Associations of Fine Particulate Matter and Its Specific Components With Recurrent Stroke Neurology Background and Objectives Ambient particulate matter less than 2 point 5 micrometer PM 2 POINT 5 has been extensively associated with morbidity and mortality of stroke

2C United States PM 2 POINT 5 Atmospheric Chemistry Insights from the Global COVID 19 Pandemic A Review ACS Publications American Chemical Society PM 2 POINT 5 Chemistry and Impacts How have number concentrations mass concentrations and chemical composition of particulate matter

2D United States PM 2 POINT 5 Atmospheric stressors and kidney diseases Nature Reviews Nephrology Emerging evidence from epidemiological studies indicates that exposures to ambient air pollutants such as particulate matter PM 2 POINT 5 and PM10

2E United States PM 2 POINT 5 Deals of the day Beat the heat with up to 50 percent off on split ACs – cool your home without Mint Simply put it lets you see how much power you have saved along with details such as temperature fan speed and cooling It comes with a PM 2 POINT 5 filter

2F United States heat pump Experts Reveal How a Heat Pump Could Help You to Lower Your Energy Bills Realtor com Simply put a heat pump is an HVAC system that heats and cools a home by transferring heat In the summer it works much like a standard air

2G United States Idiot Corner wood burning Fire Pit Surplus Named Among Retailers to Buy the Best Wood Stove in 2026 Financial Content Fire Pit Surplus named in Tech Bullion 2026 guide for best wood stoves highlighting its efficient EPA certified heating options

2H United States heat pump rebate Four Billion Dollar energy rebate program at risk what homeowners could lose Yahoo HEAR a program that offers rebates to low and moderate income homeowners for electric appliances like heat pumps and induction stoves has already Find Rebates and Incentives for Your Home The Switch Is On The Switch Is On AI Overview The Four Billion Dollar 4B energy rebate program known as the Home Electrification and Appliance Rebates Program HEAR is facing the risk of repeal due to a recent House bill This could lead to significant financial losses for homeowners who have relied on these rebates to upgrade to energy efficient appliances like heat pumps and induction stoves The program which was initially part of the Inflation Reduction Act has already faced setbacks including a pause in funding by the U S Department of Energy Homeowners in 12 states and the District of Columbia have already launched rebate programs using the Four point five Billion dollars in HEAR funding However the potential loss of these rebates could impact HVAC manufacturers and contractors as well as homeowners who have already invested in energy efficient upgrades

2i United States heat pump rebate Four Billion Dollar energy rebate program at risk what homeowners could lose The Cool Down To fully maximize your savings pairing electric appliances like a heat pump with solar panels could be a good choice Energy Sage makes it easy to

2j United States heat pump The heat pump a modern and efficient solution Hydrocarbon Engineering Technically heat pumps have an operational principle that is similar to that of a normal household refrigerator Basically they have a refrigerant

2K United States heat pump Heat pump sector dampens expectations for market development despite 10 percent growth Clean Energy Wire Clean Energy Wire German heat pump sales are set to increase by about ten percent this year to reach three hundred thirty thousand units and growth rates will remain

2L United States heat pump Heat Pumps are the future! The Miscellany News Decidedly unglamorous the humble heat pump is an electricity powered dual function unit that can heat and cool spaces Heat pumps will prove

2M United States heat pump Homeowner speaks out after noticing diverging American appliance trend The Cool Down Heat pump on the side of a house Photo Credit iStock Heat pump HVACs are quickly becoming a popular home renovation in U S homes But despite

2N United States heat pump HVAC expert dismantles common homeowner myth about modern heat pumps We got 600 Yahoo Shopping A recurring complaint from heat pump skeptics is that modern units are not capable of efficiently warming and cooling poorly insulated or aging

2O United States heat pump HVAC giant passes Department of Energy test with futuristic appliance tech The Cool Down Heat pumps rely on refrigerant technology similar to how a traditional AC unit works to move heat from the air and into and out of spaces depending

2P United States heat pump HVAC tech breaks down common misconception about modern heat pumps It is hard to believe The Cool Down An HVAC installer appeared in a YouTube video to dispel a recurring myth that modern heat pumps are not up to the task of warming homes in

2Q United States heat pump Lower Bills Better Grids Heat Pump Benefits for Electric Resistance Heated Homes – RMI One of the clearest opportunities is upgrading homes that still rely on electric resistance heating to highly efficient heat pumps Today modern

2R United States PM 2 POINT 5 Maternal PM 2 POINT 5 exposure induces insulin resistance in adult male mouse offspring via gut–liver axis Springer Nature However the mechanisms by which maternal PM 2 POINT 5 exposure induced metabolic disorders in the offspring remain unknown Methods Eight week old pregnant

2S United States heat pump Midea Unveils the H Pack at MCE 2026 A Major Step Forward in Affordable Compact Heat Yahoo Finance Midea a global leader in the HVAC industry has officially unveiled its groundbreaking H Pack hybrid heat pump at MCE 2026

2T United States heat pump Midea unveils PV compatible indoor heat pump for space constrained residential applications PV Magazine Midea has launched a compact indoor air source heat pump for retrofit and space constrained homes The R290 based system offers up to 4 point 45 kW

2U United States heat pump Plumbers share honest takes about heat pumps after homeowner considers upgrade Yahoo Shopping Instead of generating heat like traditional water heaters heat pump water heaters pull ambient energy from the air to heat water

2W United States PM 2 POINT 5 Wildfire Smoke WFS Multiyear wildfire smoke exposure Multi WiSE metrics a data driven approach to – Nature Fine particulate matter PM 2 POINT 5 a primary component of WFS is commonly used to characterize WFS exposure PM 2 POINT 5 has been associated with a wide

2X United States heat pump rebate Officials announce return of fifteen hundred dollar rebate program for new HVACs – Yahoo Past projects have included heat pump water heaters heating and cooling systems insulation and other efficiency improvements

2Y United States PM 2 POINT 5 Exposure May Increase Sleep Apnea Risk Pulmonology Advisor Long term exposure to fine particulate matter PM 2 POINT 5 and its constituents is associated with an increased risk for sleep apnea SA researchers

2Z United States Idiot Corner wood burning When Burning Wood To Brew Wood To Preserve Wood Pine Tar Hack a day Wood we did not burn obviously The distillation process wood brew uses it fairly traditional and consists of a couple of buckets One bucket is

2ZA United States Idiot Corner Do not burn wood to begin with wood burning Why modern day furniture poses a fire risk MSN More for You Scientists say we may have been wrong about the origin of life Popular Mechanics The worst types of wood that are not worth burning in

2ZB United States heat pump rebate With home heating oil costs soaring will more people install a heat pump? Salt Wire Because heat pumps offer a cheaper and greener alternative to oil rebates were a hot ticket early on but many of the most attractive options

3 Alaska Wrangell heat pump rebate Heat pump rebate presentation set for April 14 at library Wrangell Sentinel The ACES program offers rebates ranging from Four Thousand Dollars to Eight Thousand Five Hundred Dollars for the installation of heat pumps which run on electricity and use the temperature

4A California Idiot Corner wood burning Pacific Gas and Electric pilots Carbonizer machine to burn waste wood with few emissions Action News Now Officials say this process converts wood waste into a product called biochar and emits extremely low amounts of greenhouse gases and smoke

4B California heat pump rebate Coming Soon Spring California Climate Credit to Deliver Energy Bill Savings to PG and E Customers Stock Titan According to PG and E programs include an induction cooktop loaner Energy Action Guide EV charging rebates heat pump savings estimates and Go Green

4C California heat pump rebate HVAC in California in 2026 what every homeowner needs to know right now North Penn Now heat pump However doing so is often the most financially advantageous choice right now because of the rebate programs in place The TECH Clean

4D California Carmichael heat pump rebate Home Energy Forum Highlights Electrification Heat Pump Savings Carmichael Times Installation for a high efficiency heat pump water heater

starts at Five Thousand Five Hundred forty seven dollars including a Less Utility Instant Rebate of up to Three Thousand Dollars for qualifying

4E California Malibu Pacific Coast Highway PM 2 POINT 5 Alert Center Caltrans Weekly Road and Lane Closures on PCH Malibu City org PM 2 POINT 5 to PM 2 point 8 from 8 PM to midnight when crews are working Additional one lane control PM 1 point 3 to PM 1 point 8 for Verizon work weekdays 8 PM to midnight

4F California Ventura County heat pump rebate City Council Meetings Return to Council Chambers Beginning April 14 ed hat Also Read Dr John Fankhauser named Director of the Ventura County Health Care Agency · Ventura County Supervisors Approve Heat Pump Rebate and

4G California Los Angeles wood burning Evacuations Ordered As California Fire Explodes In Size Due To High Winds News radio WOOD 13 hundred and 106 point 9 FM iHeart Meanwhile another fire the Crown Fire is burning in Los Angeles WOOD FM Public Inspection File · WOOD FM Political File · EEO Public File

4H California McCloud wood burning 248 acre prescribed burning near McCloud uses drone technology – YouTube 248 acre prescribed burning near McCloud uses drone technology

4i California Sacramento Municipality Utility District SMUD heat pump rebate SMUD Expands Rebates on Heat Pump HVAC and Water Heaters in Sacramento Tallahassee Democrat Sacramento homeowners Can Now Save Up to 7 thousand dollars on Energy Efficient Heat Pump HVAC and Water Heater Upgrades Through SMUD Rebates

4j California San Francisco heat pump rebate Heat Pump Water Heater Rebates in the Bay Area A Homeowner Guide The Good Men Project The standard rebate is Two thousand five hundred dollars when you replace a gas water heater with a heat pump model Replacing an electric resistance unit gets you five hundred dollars

4K California San Francisco heat pump Bay Area startup introduces flat rate single room heat pumps Canary Media Merino Energy says their through the wall heat pumps are faster to install than ductless systems They will be available for Thirty Eight Hundred Dollars installation

4L California San Francisco heat pump These heat pumps can be installed in an hour and will cut costs in half Fast Company Merino Energy a new startup led by a former Apple designer created a lower cost heat pump that launched today

4M California San Francisco heat pump U S startup debuts low cost plug and play indoor heat pump for residential use PV Magazine San Francisco based Merino Energy has launched the Merino Mono a plug and play indoor heat pump that can be installed in under an hour and is

4N California San Francisco heat pump Why a former AirPods engineer is now building heat pumps TechCrunch Merino Energy has simplified the heat pump dramatically in a quest to make them cheaper and easier to install

5A Colorado Denver heat pump rebate Solar and Heat Pump Group Buying Programs for Homeowners Denver City and County Denver gov org However navigating so many funding

sources can be a challenge Our goal is to simplify it for you plus get you an additional discount Save More

5B Colorado Golden wood burning Crews respond to fire in Golden Township – YouTube Crews respond to fire in Golden Township 326 views · 12 hours ago more WOOD TV8 265K Subscribe 2 Share Save Report Comments

5C Colorado Roxborough State Park wood burning Wildfire burning southwest of Roxborough State Park is now 11 acres not expected to grow YouTube Wildfire burning southwest of Roxborough State Park is now 11 acres not expected to grow

5D Colorado Vail heat pump rebate Column Climate Action Collaborative When the climate conversation gets real Vail Daily Rebates are available for a variety of upgrades including cold climate heat pumps induction stoves electric panels and wiring heat pump water

6 Delaware PM 2 POINT 5 7 DE Admin Code 1102 Natural Minor Permit Applications Bishop Hastings Funeral Home DNREC Delaware gov The crematory incinerator will be permitted to emit up to zero point six eight seven tons per year TPY of PM PM10 PM 2 POINT 5 0 point 750 TPY of CO 1 point 082 TPY of NOX 0 point 085

7A Iowa Cedar Rapids wood burning Grass fire burns 35 acres in southeast Cedar Rapids – YouTube A grass fire in southeast Cedar Rapids is still burning after hours on Monday night

7B Iowa Fort Madison and Mississippi ordinance and wood burning City passed first reading of open burn rule Daily Democrat Fort Madison Iowa Mississippi Valley Publishing The ordinance would also set the definitions for backyard burning clean dry wood ordinance will also allow the fire chief to establish a burn

8 Kansas to Colorado wood smoke Pike San Isabel National Forests and Cimarron and Comanche PSICC National Grasslands PSICC prepares for Spring prescribed fire treatments USDA Forest Service For more information please go to Wood smoke and health Once the prescribed fire begins smoke may be present for several days or weeks in the

9 Louisiana PM 2 POINT 5 Will community air monitoring bring Cancer Alley cleaner air? C and EN American Chemical Society These stationary monitors measure pollutants including ozone nitrogen dioxide sulfur dioxide and PM 2 POINT 5 The area also has a few noncontinuous

10 Maine heat pump rebate Save Money on a Heat Pump Water Heater That Can Reduce Your Electric Bill Maine gov You know with the war in Iran the price of oil and gas right now is top of mind for families across this country but especially in Maine

11A Michigan Grand Rapids idiot Corner wood burning Do You Need a Permit for Fires in Grand Rapids? – WGRD wood burning fire Do You Need a Fire Permit in Grand Rapids? According If you are planning to burn wood in a backyard fire pit you will

11B Michigan Sault Sainte Marie heat pump rebate Program offers rebates for heat pumps insulation windows and more SooToday com Program offers rebates for heat pumps insulation windows and more The Home Renovation Savings program is open to eligible owners of detached and

12 New Mexico Ruidoso wood smoke Sago Fire Update for March 29 2026 NM Fire Info wood burning stoves Dwellings with fireplaces or wood burning stoves shall have proper screens installed to prevent the escape of burning embers

13A North Carolina Asheville ordinance and wood burning Abandoned building ordinance proposed to reduce fire and squatter concerns in Asheville WLOS Asheville city leaders are set to consider a stricter ordinance aimed at tackling ongoing problems with abandoned buildings

13B North Carolina wood burning Two wildfires continue to burn in western North Carolina – YouTube The North Carolina Forest Service said there are two wildfires that are burning in McDowell and Mitchell Counties

14A Pennsylvania wood smoke Burning incense can be harmful to your health Altoona Mirror Of the 64 toxins identified in incense smoke two have been If you have a wood burning fireplace with an uncapped chimney there is

14B Pennsylvania Pittsburgh Westmoreland County wood burning Couple escapes burning home in Westmoreland County YouTube Couple escapes burning home in the Westmoreland County Pittsburgh Go to channel WOOD TV8 MDOT US 131 shut down after tanker truck fire

15A South Carolina wood smoke Horry UPDATE AT 12 A M FIRE CONTAINED As of 12 a m this woods fire—which has Facebook number HCFR SMOKE NOTICE WOODS FIRE COOKES CIRCLE At 738 p m Horry County Fire Rescue was dispatched to the area of the seven thousand block of Cookes

15B South Carolina Myrtle Beach ordinance and wood smoke NMB approves first reading of ordinance to ban smoking on public beaches YouTube The City of North Myrtle Beach has passed the first reading of an ordinance on Monday to ban smoking on public beaches according to documents

16A Tennessee Heat Pump Rebate Geo Wise Oak Ridge National Laboratory A tool to help make wiser decisions on geothermal heat pump systems Geo Wise is the first of its kind web based software tool empowering users to

16B Tennessee heat pump rebate This Tennessee Couple Plugs Into Solar One Outlet at a Time Southern Alliance for Clean Energy Richard and Mary Cawthorn installed a plug in solar system at their Tennessee home pairing small scale generation with years of energy efficiency

17 Utah wood smoke The Smoke from controlled burns near Utah Lake causes confusion – YouTube Plumes of black smoke could be seen near Utah Lake causing some residents to report

18A Vermont South Burlington wood smoke [RAWSEP View](#) This article does not address the adverse health effects of breathing wood smoke If you can smell wood smoke you are inhaling wood smoke particulates PM2 point 5 [South Burlington bagel shop faces lawsuit over wood fired smoke odor](#) WCAX Court documents show the couple complained about smoke and the scent of burning wood drifting into their backyard from Myer wood fired oven South Burlington bagel shop faces lawsuit

over wood fired smoke odor

Excerpts edited by Residents Against Wood Smoke Emission

Particulates a 501C3 nonprofit organization

WCAX

March 25 2026

SOUTH BURLINGTON

Vermont WCAX There trouble brewing over fresh baked bagels at a South Burlington bakery The phrase not in my backyard typically applies to solar panels or construction but for the folks living behind Myer Bagels the struggle is over the smell of smoke When the shop moved to Shelburne Road in 2023 they hoped neighbors would be pleased to have a local bakery Owner Adam Jones says many were but not the couple living behind the building The neighbors came and approached us and said Look we are being annoyed by the smoke that you produce Jones recalled Those neighbors Appletree Court residents Robert Payson and Kathy Brunette declined our request for an interview Court documents show the couple complained about smoke and the scent of burning wood drifting into their backyard from Myer wood fired oven They allege it was unbearable making them cough leaving a lingering smell and residue in their home and forcing them to stay inside In 2024 the couple filed a complaint with the city of South Burlington To meet the city smoke and odor standards Myers installed a blower It will not eliminate smoke but any smoke coming up it will diffuse it and expand it and it might create less concentration thus less odor Jones said The couple kept complaining so South Burlington hired a consultant to conduct an air quality test The results showed Myer was in compliance with city standards Still Payson and Brunette pushed back In the fall of 2024 the bagel shop received a summons They were suing Myer for nuisance trespassing and negligence Last fall a Superior Court judge tossed out the couple claims of trespassing and negligence Now Myer and its neighbors are attending mediation sessions hoping to solve the couple nuisance claims without going to trial Other neighbors say they smell the smoke and are not bothered by it but they feel for the couple A couple of times a week It all depends on the time of day when you are out and of course the direction of the wind No it does not bug me but we are also not as close to where the actual exhaust is said Brian Ecken Roth Baking bagels seven days a week Jones says the couple lawyer suggested a more expensive infrastructure upgrades to remedy the smoke

18B Vermont Idiot Corner wood smoke DEC How to season firewood and cut costs smoke and fuel use Vermont Business Magazine Unlike wet wood seasoned wood burns hotter and cleaner and does not create as much smoke said DEC Commissioner Misty Sinsigalli burn the right wood the right way To season wood for safer cleaner burning follow these tips as well Split wood into various sizes no larger

19A Washington wood smoke Two decades later popular grant program keeps costs and air pollution down Washington The Washington State Department of Ecology Our Wood Smoke Reduction Grant Program began in two thousand five distributing around three to four million dollars every biennium in a competitive grant process These grants are

19B Washington Wenatchee wood smoke Prescribed Burns Underway Near Wenatchee This Spring News Radio 560 KPQ The smell of wood smoke drifting over Wenatchee this spring is not cause for alarm it is a sign that forest managers are hard at work Decades of

19C Washington Yakima PM 2 POINT 5 PM 2 POINT 5 map Yakima herald com Yakima Herald Republic PM 2 POINT 5 map · 0 comments · Welcome to the discussion Posting comments is now limited to subscribers only Become one today or log in using the link

20A Washington DC heat pump rebate The heat pump water heater payoff Here is how to crunch the numbers The Washington Post Yet piecing together local and federal rebates as well as off peak electricity rates and demand response payments allowing the utility to dial down

20B Washington DC heat pump Here is how I got my heat pump water heater to pay me The Washington Post What I learned about what to buy how to save and what to avoid before plugging in a heat pump water heater

21A Canada heat pump rebate Back in the Race Clean Energy Canada rebate went live and the war in Iran drove up gas prices Just weeks While heat pumps still save money in many scenarios across Canada

21B Canada wood burning Drax in the United Kingdom Does Burning Wood Actually Fight Climate Change? Tree Frog creative A company building two of the largest wood pellet mills in Canada says it will rely on a steady diet of trees logged in forests recently burned by

21C Canada heat pump rebate High gas prices got you down? Here is how much EVs and heat pumps can help your bottom line Toronto Star The Iran war was the latest shock to energy prices Helped by the newly established again the federal EV rebate savings from going green can be

21D Canada British Columbia City of Powell River Qathet Regional District wood smoke Woodstove replacement continues in Qathet Regional District Powell River Peak **Excerpts**

edited by Residents Against Wood Smoke Emission Particulates a 501C3 nonprofit organization

Qathet Regional District qRD will continue to offer the provincial community wood smoke reduction program in 2026 with rebates available on a first The community wood smoke reduction program will continue in 2026 even though the province is not funding an allocation to Qathet Regional District A total of eleven thousand five hundred dollars has been allocated to the program which has funded **since 2019 one hundred seventy woodstove removals for cleaner devices** Qathet Regional District qRD will continue to offer the provincial community wood smoke reduction program in 2026 with rebates available on a first come first served basis until remaining grant funds are fully depleted At the April 7 regional board meeting the Electoral Area B director said he was going to vote against the initiative because even though it is a grant program the administration cost is a dollar for every dollar distributed from the program It is costing us a lot of money and we have a lot of irons in the fire when it comes to the solid waste management service because that is the silo that this falls under I do not support continuing this program It costs the taxpayers and our staff has other priorities to work on **City of Powell River director Cindy Elliott said the program is money well spent because it is replacing older woodstoves Area D director Sandy McCormick said she supported the motion because the regional district should do whatever it can to keep the air as clean as possible That is why this motion is really important said McCormick It does send a message that this is important to us I hope by whatever means this program is able to continue down the road because it is worthwhile The board voted in favor of the motion with Gisborne opposed According to a staff report over the past seven years qRD has been selected to participate in the provincial program which encourages the replacement of old smoky woodstoves for cleaner heating options through financial incentives In 2026 qRD received notification that due to budgetary constraints it would not be likely to qualify for a grant in 2026 From the 2025 program there was six thousand five hundred dollars in grant funds remaining to be distributed and there was a**

recommendation that an additional five thousand dollars be provided through the solid waste management service bringing the total for 2026 to Eleven Thousand Five Hundred Dollars Since 2009 the region has provided rebates for a total of 170 woodstove removals and replacements through the program At a committee of the whole meeting last month qRD directors were presented with a recommendation that the board continue with the program

21E Canada Quebec Montreal wood smoke 2009 Green Life Column Let clear the air Montreal Gazette But for those of us who live near certain restaurants where food is cooked on charcoal wood smoke is still an issue wood burning appliances like Green Life Column Let us clear the air Restricting fireplaces in homes is not enough especially for neighbors of rotisseries who say the city should help such restaurants cut down on smoke pollution By Michelle Lalonde The Gazette The warm weather is finally here and I think I can safely say wood heating season is over That has many Montrealers breathing Excerpts edited by Residents Against Wood Smoke Emission Particulates a 501C3 nonprofit organization The Montreal Gazette By Monique Beaudin June 15 2009 Let us clear the air Restricting fireplaces in homes is not enough especially for neighbors of rotisseries who say the city should help such restaurants cut down on smoke pollution By Michelle Lalonde The Gazette The warm weather is finally here and I think I can safely say wood heating season is over That has many Montrealers breathing a sigh of relief especially those with asthma smoke allergies or other respiratory problems But for those of us who live near certain restaurants where food is cooked on charcoal wood smoke is still an issue If you ride your bike up Rachel Street toward the mountain for example you can see and smell the smoke billowing from the chimneys of the many popular grilled chicken joints in the neighborhood the ones that burn wood to make charcoal Now I am all for cheap grilled chicken but not if it fouling the air I breathe The city recently released its annual report on air quality and nobody can deny we have a very big problem with wood burning in Montreal We had a record 68 poor air quality days in 2008 and 67 of those were due to particulate matter which is exactly what comes out of chimneys when you burn wood Montreal had a record 45 smog days last winter between Nov 1 and March 31 and wood smoke contributes significantly to smog But it is the fine particles from wood smoke so fine they penetrate deeply into our lungs that makes this smoke so dangerous This is no joke Those fine particles cause an estimated six thousand and twenty eight cases of bronchitis among children in Montreal each year and tens of thousands of asthma attacks Health Canada estimates one thousand five hundred forty people die prematurely each year because of air pollution in Montreal That why the city passed a new bylaw in April that outlaws the installation of new wood burning appliances like wood stoves and fireplaces in homes But the bylaw specifically exempts commercial establishments that burn wood to cook food like pizzerias bagel bakeries rotisseries and grill houses Executive committee member Alan DeSousa said these pollution sources are considered marginal sources of wood smoke and his administration felt it would be more effective to act on homeowners who burn wood to get the biggest bang for the buck So restaurants can continue to cook with charcoal but not without restraint DeSousa noted There are air pollution bylaws in this city for commercial and industrial operations restaurants included If people believe the law is being broken they should call up one of the city inspectors ... And if restaurants are breaking the laws the inspectors will get out there and apply the law he said Well in fact at least 20 people have complained about the quantity of smoke and odors coming from four grilled chicken restaurants on and around Rachel St in the Plateau so far this year according to environment department spokesperson Valérie De Gagné

Inspectors were dispatched to investigate each complaint and in fact they did confirm there are problems with excessive odors and with **visible smoke** she said. Warning letters were sent to the owners of the chicken restaurants in December demanding action by Feb 10 and again in April demanding action by the end of that month. No remedial action has yet been taken by any of the restaurants De Gagné said. Officials in the industrial emissions section of the city environment department are considering their next move De Gagné said which could include fines or legal action within the next couple of weeks. Raquel Dias is manager at Rotisserie Romados perhaps the most popular of the grilled chicken joints in the Plateau. She said the restaurant owners are negotiating with the city and plan to install a new ventilation system in July. But residents like Hazel Field said the smoke is out of hand and the city needs to help the restaurants get it under control. She said nobody wants to see these places shut down but the amount of smoke they generate is ridiculous. It like watching an old fashioned movie of some coal mining town. I was coming up Rachel the other day and the smoke was just coming out in such great quantities I wanted to puke. I was so mad. Naomi Kramer whose son goes to school in the neighborhood said the city cannot turn a blind eye to this problem just because it is not the main source of fine particle pollution. **You can see and smell the toxins that are being produced Kramer said. There are young children playing in parks close by.** With all these rotisseries in the same neighborhood it like going through an industrial area with refineries. Air pollution is in fact a particular problem in neighborhoods like the Plateau because **Mount Royal blocks air currents that would otherwise quickly dissipate the smoke.** This means those harmful fine particles stay low where people breathe them in for longer than they would otherwise. Dias of Romados said the restaurant hopes to avail itself of government subsidies to be able meet the city demand for better ventilation equipment. **But so far the restaurant has not been fined or otherwise threatened by city inspectors.** They have been very understanding with us she said. Understanding is good. But at some point enough is enough. **It seems the city has been operating on the assumption that Montreal residents would rather have cheap grilled chicken than clean air.** Sure it will cost money for these businesses to install new equipment but I for one would be happy to pay a little more for my chicken if that what it takes for these restaurants to clean up their acts. No commercial enterprise has the right to flout air pollution laws no matter how tasty their product. **It also disturbing that the city environment department does not do regular scientific inspections on commercial smokestack emissions.** They only investigate in response to public complaints and inspectors use their eyes and noses to evaluate whether something should be done. **So who knows how much particulate and other pollution is pouring out of those stacks?** No one wants Montreal to shut down its bagel shops grill houses or oven baked pizza restaurants but it seems to me **if the city is cracking down on fireplaces it should at least be doing regular inspections of commercial operations that burn wood to ensure they are not polluting excessively.** If you see or smell smoke in your neighborhood that you fear may be toxic or dangerous call 514 280 4330. Be sure to leave your name and number and say that you want an inspector to call you back with results. To read the city latest air quality report by the Réseau de surveillance de la qualité de l'air go to [www rsqa qc d ca](http://www.rsqa.qc.ca) and click on Documents.

22 Australia Firefighters wood smoke The smell of danger – understanding wildfire smoke exposure **RAWSEP View** This article addresses the adverse health effects of breathing wood smoke. If you can smell wood smoke you are inhaling wood smoke particulates PM2 point 5. **Excerpts edited by Residents Against Wood Smoke Emission Particulates a 501C3 nonprofit organization** Wildfire

Today Wildfire smoke is more than just the scent of burning wood it is a complex shifting mix of thousands of gases and particles Fine particulate matter The smell of danger – understanding wildfire smoke exposure Guest Writer April 9 2026 By Anthony White At a laboratory in Australia researchers are trying to develop rapid accessible tests that can protect firefighters military personnel and the wider community from the escalating health burden of wildfire smoke and polluted air The olfactory tissue located high in the nasal cavity directly connects the outside world to the brain making it uniquely vulnerable to toxic particles in polluted air and wildfire smoke By studying cells and molecular changes in this tissue researchers can potentially identify early biological warning signs of harm before symptoms appear This article is first published in Wildfire Magazine Anthony White presented on this research at the 4th International Smoke Symposium in Florida in March 2026 **The team at the QIMR Berghofer Institute in Brisbane is pioneering the use of the nose as a frontline sensor of environmental harm** Using cutting edge approaches such as stem cell derived models advanced imaging and profiling of genes and proteins the lab investigates how air pollutants trigger inflammation damage protective barriers and accelerate risks for neurological diseases such as Alzheimer Parkinson and motor neuron disease This work is helping to establish olfactory tissue as a powerful not invasive biomarker source for monitoring exposure and predicting long term brain health impacts Understanding the role of the nose Where there is fire there is smoke and our noses have been reading that signal for millions of years Smell is one of our most primal senses hard wired to memory and survival Fire first burned on Earth about 360 million years ago and has been shaping animal and then human behavior ever since **In Australia for example bushfire smoke awakens the Gould long eared bats and fat tailed dunnarts from rest triggering escape behaviors Other species detect smoke and fire in different ways birds of prey follow smoke columns for hunting opportunities while fire beetles actively seek out burnt wood to lay their eggs** By about three hundred thousand years ago humans were managing fire themselves For Indigenous cultures across the planet fire and smoke became a part of seasonal rhythms and land stewardship Cultural burning practices were designed not only to manage vegetation but to protect biodiversity including giving animals time and cues to move away from danger For many early people the scent of smoke was not just a warning it was the smell of home But in the climate today as wildfires become more frequent intense and prolonged and smoke plumes drift across continents what does the smell of smoke mean to us now? Can our noses still help us make sense of this modern environmental threat? What is in wildfire smoke and why it matters **Smoke Pollution Alert – Public Health Notice Air quality in your region has reached hazardous levels due to wildfire smoke Children elderly adults and people with heart or lung conditions should stay indoors Avoid physical activity outside Use air purifiers if available** The smell of smoke may be present even when skies appear clear We see alerts like these more often now But why do we need such warnings? What is in the smoke that makes it so dangerous? Wildfire smoke is more than just the scent of burning wood it is a complex shifting mix of thousands of gases and particles Fine particulate matter $PM_{2.5}$ is especially concerning these microscopic particles are small enough to bypass the nose and lung natural defenses and enter deep into the bloodstream Mixed into this airborne soup are harmful gases such as carbon monoxide formaldehyde acrolein and benzene many of which are known to damage cells irritate tissues and disrupt bodily systems The specific chemical makeup of the smoke can also change depending on what burns forest grassland peat or homes and vehicles packed with synthetic materials This matters as these pollutants can trigger asthma bronchitis and cardiovascular issues They can damage blood vessels and

some have been linked to changes in brain function increasing the risk of neurological disease with prolonged exposure. Our noses may register that familiar campfire aroma but science tells us it may be a toxic warning signal. First contact the nose as a sensor. The nose is more than a breathing gateway it is a carefully tuned chemical detection system and our first responder to air pollution. As we inhale air passes through narrow nasal passages lined with mucus and tiny hairs called cilia that trap particles and pathogens. But higher up near the roof of the nasal cavity lies a key tissue the olfactory epithelium. This small specialized patch of nasal cells contains olfactory nasal receptor neurons cells capable of detecting thousands of different airborne molecules including those in wildfire smoke. When these molecules bind to the receptors they trigger electrical signals that travel directly to the olfactory bulb of the brain bypassing many of the filtering systems other senses rely on. This fast track connection to brain regions controlling emotion and memory explains why the scent of smoke and other aromas can evoke vivid memories or instinctive fear. The nose also plays a frontline protective role filtering harmful particles and engaging the immune system in response to what we inhale. In the context of wildfire smoke this makes the nose not just a detector but a biological barrier and the first to suffer damage when we breath toxic air.

Nose to brain particle delivery. Medical Research Institute. Smell to science sampling the nasal airway. The nose does not just react to smoke it also records what is coming in. Inside its delicate lining wildfire smoke can leave behind markers of biological changes like a molecular fingerprint of exposure. Researchers can potentially use this turning the nasal passage into a powerful site for not invasive health monitoring. Using simple tools like a nasal brush or swab scientists can gently collect cells from the olfactory epithelium the same region that detects smell. This is similar in practice to a COVID 19 nasal test. In some cases specialists may also perform a nasal mucosal biopsy using a small surgical tool under local anesthetic to collect a more in depth tissue sample. Once gathered researchers can apply techniques such as RNA gene sequencing protein analysis and microscopy to uncover how smoke is affecting cellular responses.

Biological clues in the nose. The nasal lining responds quickly to environmental insults and wildfire smoke is no exception. When exposed nasal cells may begin to express what researchers call biological clues or biomarkers – measurable signs that the body is reacting to harm. These clues can include inflammation signals like cytokines inflammatory signal proteins released by cells oxidative stress free radical markers and DNA injury. In high risk groups these changes often show up earlier and more locally in the nose than in blood or lung samples making nasal testing a potentially powerful and accessible tool.

A gateway to the brain. The brain is normally thought of as well protected shielded by a blood brain barrier a layer of cells that control movement of substances from the blood into the brain. But there is one route where this barrier can be bypassed through the nose. The olfactory nerve which carries smell information directly into the brain passes through tiny holes in the skull directly linking the nose and the brain Figure 1. This close contact means that toxins or particulates from smoke can in theory reach the brain. This pathway is now being studied as a possible link between repeated wildfire smoke exposure and neurological symptoms like brain fog fatigue and even long term disease risk. The nose may be a critical warning system not just for the lungs but for the brain as well. Firefighters veterans and other vulnerable groups. Wildland firefighters are among the most exposed people on the planet when it comes to wildfire smoke. Many spend days on the frontline with limited respiratory protection season after season. Military veterans particularly those with past exposure to burn pits or combat environments may carry additional respiratory and neurological vulnerabilities especially when they transition into firefighting roles. But the

risk is also wider. Children whose lungs and brains are still developing, older adults whose systems are more fragile, and people with asthma, cardiovascular disease, or diabetes are all more sensitive to smoke, even at levels lower than what firefighters face. That is where nasal testing could make a difference. By identifying early biological changes in the nose, scientists may be able to detect exposure impacts before damage becomes irreversible. These tests could help guide rest periods, determine when a responder needs support, or help families make informed decisions about smoke exposure in high-risk regions. The potential for early detection. The idea is simple: a quick, low-cost test using a nasal swab that could reveal whether smoke exposure has begun to take a toll on your body before you feel sick. This could be done in clinics, field stations, or potentially as part of mobile testing units deployed during major fire seasons. Researchers are developing tools that can read inflammatory markers, stress signals, and other biological clues in nasal tissue to understand how smoke exposure is progressing. The goal is to offer real-time feedback for those on the front lines and early reassurance or warning for the broader public. With climate change driving longer fire seasons and heavier smoke loads, early detection could become a cornerstone of future health response, and the nose, the unlikely frontline of wildfire resilience. Protecting the nose and the body. Protecting ourselves from wildfire smoke starts at the source. Indigenous cultural burning has long offered a safer, smarter way to reduce fuel loads, protect biodiversity, and minimize smoke intensity. Supporting these methods alongside prescribed burns, forest restoration, and land use reform helps tackle the problem before it reaches our lungs. For those on the front lines, modern protective tools, from high-quality respirators and improved shelter infrastructure to air quality monitors and ventilation systems, are crucial. Researchers are also exploring nasal sprays, filters, and non-inflammatory treatments to help reduce harm where exposure starts. At the public health level, early warning systems, clear air quality messaging, and potentially even nasal-based health testing could offer communities more agency and real-time decision-making during fire season. By protecting the nose, we may be able to help safeguard the brain, lungs, heart, and future health of those most affected by our changing air. Anthony White works at the QIMR Berghofer Medical Research Institute in Brisbane, Queensland, and has been awarded an NHMRC Senior Research Fellowship. His research has contributed to the development of first-in-class metal drugs as a potential new therapeutic approach to treat motor neuron disease. He is currently developing new human patient-based models of neurodegeneration and has established a new research direction examining the impact of wildfire smoke on the human brain. Comment: April 9, 2026. Thanks for a fascinating glimpse of this research. I do a fair amount of underburning on my little patch of mixed conifer forest, but I avoid the smoke as much as possible.

23A United Kingdom wood smoke Drax Does Burning Wood Actually Fight Climate Change? The Tyee Does Burning Wood Actually Fight Climate Change? Despite industry claims, scientists say using wood pellets is little better than fossil fuels. Burning coal to burning wood. In 2024, the plant burned nearly 7.6 million tons of wood pellets, which the company asserts are both a

23B United Kingdom PM 2.5 Particulate Air Pollution and Constituents Exacerbate 10-year ASCVD Risk Oxford Academic Oxford University Press Long-term exposure to fine particulate matter (PM 2.5) increases atherosclerotic cardiovascular disease (ASCVD) risk, but evidence on its

23C United Kingdom heat pump Why heat pumps are central to industrial decarbonization and energy resilience Enlit World Stephen Horrax of Ramboll writes on how heat pumps and the

electrification of heat will be crucial for long term energy resilience Why heat pumps are central to industrial decarbonization and energy resilience Excerpts edited by Residents Against Wood Smoke Emission Particulates a 501C3 nonprofit organization Enlit World April 2 2026 Stephen Horrax of Ramboll writes on how heat pumps and the electrification of heat will be crucial for long term energy resilience Stephen Horrax Director of Business Area Energy UK and Ireland Ramboll In 2025 research by the British Chambers of Commerce BCC found that 64 percent of businesses had adopted energy efficiency measures such as upgrading to LED lighting installing more insulation or cutting down on unnecessary energy consumption These commercially viable and policy supported efforts have mainly targeted the indirect Scope 2 emissions of purchased energy but with 2030 net zero targets now looming businesses need to address the other barrier to decarbonization Scope 1 emissions These are the emissions produced by sources a business owns or controls directly For most this means electrifying industrial heat processes such as drying pasteurizing and chemical transformation which rely especially on fossil fuels Faced with this challenge businesses have an opportunity to both take stock of the risks and unlock the material benefits of improving energy resilience Ahead of 2030 and with an eye towards embedding long term sustainability as a business priority electrifying heat becomes vital and heat pumps offer one potential solution to this pressing problem Heat pumps and the electrification of heat as a low carbon energy solution Industrial heat pumps provide the most effective low carbon solution for low temperature less than two hundred degrees Centigrade processes and produce 3 to 5 more times the efficiency gains than that of gas boilers Using clean electricity to power these heat pumps can eradicate Scope 1 emissions entirely making this an attractive energy move for businesses – yet the same research from the BCC which found 64 percent of businesses were adopting energy efficiency measures found only 7 percent of firms were using heat pumps This technology remains underutilized and businesses that begin planning implementation now by assessing viability costs and integration pathways will find themselves ahead of the curve In the face of geopolitical instability and rising energy costs an energy resilient strategy protects businesses against policy swings and market disruptions Stephen Horrax Director of Business Area Energy UK and Ireland Ramboll Heat pumps do not offer an immediate energy solution to businesses industrial heat pump projects can take up to 2 point 5 years to deliver excluding grid upgrades Their value comes from offering a long term energy resilient strategy which businesses can rely on in the face of risks such as rising energy costs market volatility and increased regulatory scrutiny of environmental impact Addressing Scope 1 emissions is a vital part of getting on track to achieving 2030 climate targets and businesses ought to act immediately to access the potential which electric heat pumps provide Energy resilience as material benefit To achieve long term energy resilience businesses must also move away from project to project decarbonization towards integrated energy strategies which combine efficiency flexibility on site generation and operational innovation A systems thinking approach to reducing carbon emissions not only increases resilience and improves project viability it also encourages greater investment by bolstering security and sustainability long term Policy support for the energy transition remains strong and now more than ever businesses are being held to high standards on meeting their low carbon targets Have you read? Navigating the cost reality of industrial decarbonization in the metal sector Electricity from CHP on the rise despite renewables boom European market readiness for thermal energy storage advances This is both as a result of increasingly stringent environmental disclosure requirements but also mounting consumer expectations that businesses live up to their sustainability

commitments By tackling Scope 1 emissions with heat pumps businesses can progress towards fulfilling their ESG frameworks The benefits of this go beyond the environmental bringing businesses into favor with investors regulators and the wider public Delaying addressing Scope 1 emissions and the net zero targets they underpin puts business at risk of reputational damage financial liabilities and missed opportunities Failure to implement energy resilience therefore has serious material consequences for businesses Not only does it impact market positioning as businesses lose ground to their greener competitors but it also poses a threat to talent retention particularly as younger generations value the ESG credibility of their workplace Climate leadership attracts talent capital and loyalty promising real advantages for businesses who take up the reins What more in the face of geopolitical instability and rising energy costs an energy resilient strategy protects businesses against policy swings and market disruptions The challenge of all this for businesses is to maintain a focused strategy amidst an economically volatile market This requires an energy strategy centered on long term resilience By eradicating Scope 1 emissions the electrification of heat through industrial heat pumps offers businesses an energy resilient pathway towards achieving their renewable and net zero energy goals About the author Stephen Horrax is Director of Business Area Energy UK and Ireland for Ramboll a global architecture engineering and consultancy company based in Denmark Horrax works on policy investment development and strategic projects and programs whilst working for and within UK Government academia commercial consulting and the private sector

24 Europe wood burning Europe Firewood Market Size Share and Growth Report 2034 Market Data Forecast Firewood is any wooden material gathered and used specifically as fuel for a fire This market operates at the intersection of traditional forestry

25A China PM 2 POINT 5 Air pollution alerts deliver big health benefits for Chinese cities Medical Xpress PM 2 POINT 5 attributable premature deaths linked to pollution episodes During periods when alerts were in effect the acute mortality risk due to PM 2 POINT 5

25B China PM 2 POINT 5 Increase in economic losses despite a decline in fine particulate matter related mortality Nature Despite substantial reductions in ambient particulate matter with a diameter of 2 point 5 micrometer or less PM 2 POINT 5 concentrations across China since the Air

26 Laos faces PM 2 POINT 5 levels above safety limits nationwide Xinhua VIENTIANE April 8 Xinhua Laos continues to struggle with dangerously high levels of air pollution with PM 2 POINT 5 concentrations exceeding According to the Lao Ministry of Agriculture and Environment on Wednesday PM 2 POINT 5 concentrations reached 196 micrograms per cubic meter in the Lao

27 Thailand PM 2 POINT 5 Public Health Ministry steps up response as PM 2 POINT 5 hits 41 provinces Nation Thailand PM 2 POINT 5 · dust · provinces · North · measures · Chiang Mai · Chiang Rai · air pollution MOST VIEWED 1 NASA releases stunning Earth images captured