Episode 56RV March 14, 2024. Enviva Wood pellet manufacturer declares bankruptcy, to restructure.

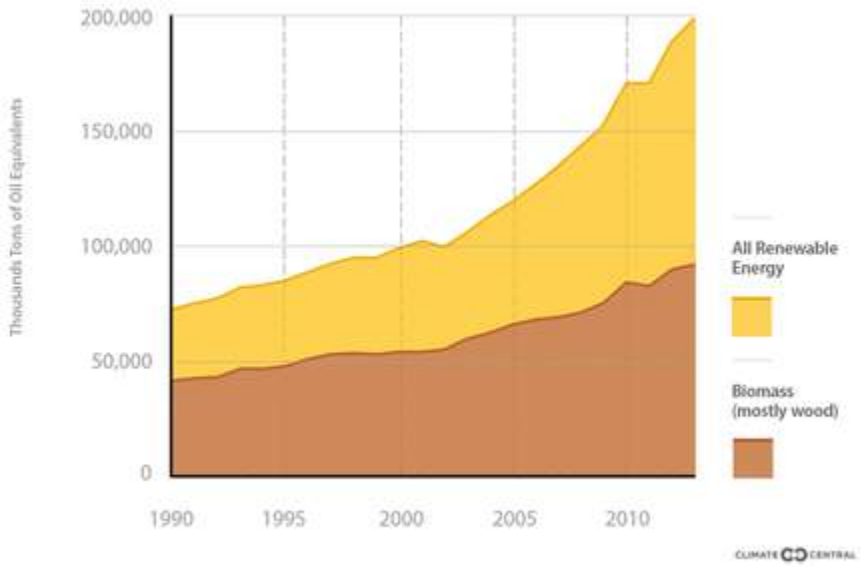
Enviva Wood pellet manufacturer declares bankruptcy, to restructure. RAWSEP View: 1)Why did this Enviva bankruptcy happen? 2)What does this Enviva bankruptcy mean for Residents Against Wood Smoke Emission Particulates? 1)The Wall Street Journal states that Enviva, the largest U.S. wood-pellet exporter, filed for bankruptcy Tuesday March 12, 2024, after a bad bet on future prices of the commodity triggered nine-figure losses. https://www.wsj.com/articles/wood-pellet-maker-enviva-files-for-bankruptcy-c1984342 The Wall Street Journal went on to state "The nation's largest exporter of wood pellets filed for chapter 11 following a failed gamble on future commodities prices." RAWSEP View: Why did this Enviva bankruptcy happen? The precipitating event may have been predicted losses of money, as the Wall Street Journal states, but what underlying factors made Enviva go under? 10 reasons (1a through 1j) Reasons 1a) through 1d)Economic Reasons. 1e and 1f)Customer or Partnership reasons. 1e)Drax and 1f)the indoor residential wood Burning industry. 1g)citizen-scientist air quality monitoring in recent years, most notably with PurpleAir PM2.5 monitors. 1h)The Biden (Burn Pit) Factor. 1i)The June 2023 incursion of wood burning wildfire smoke from Canada into the United States. 1j)New alternatives for home heating in 2024, which are cheaper. 1a through 1d)Four Economic Reasons. 1a)Operating at a loss. 1b)Relying on Government subsidies instead of generating revnue through the business. 1c)United States Government shift to subsidies for true clean renewables like Wind and Solar rather than phony and polluting so-called renewables like wood burning, as shown with funding to support community Wind and Solar and clean Electric energy projects through the Inflation Reduction Act. 1d)Operating an obsolete business that is increasingly unpopular. 1e and 1f)Customer or Partnership reasons. 1e)Customer Number 1: Enviva's main customer (partner) was the Drax wood burning power station in the United Kingdom, and Drax is being criticized for polluting and draining the United Kingdom with huge money wasting subsidies, and also, like Enviva, Drax is a businss that is unable to pay for itself without subsidies. 1f)Customer Number 2: Indoor Residential Wood Burners. The indoor residential wood burning industry, which buys pellets from Enviva and resells wood pellets to indoor residential wood burners, is also coming under fire for promoting air pollution, because 1g)citizen-scientist air quality monitoring in recent years, most notably with PurpleAir PM2.5 monitors, makes air pollution visible in the form of data points on a map, and makes the hyperlocalized sources of pollution knowable in data downloads showing levels of PM2.5 above National Ambient Air Quality Standards (NAAQS) in the yards of near neighbors of indoor residential wood burners, in some cases for the first time, showing the source is a particular indoor residential wood burner. Residents Against Wood Smoke Emission Particulates (RAWSEPresidents) makes an effort to educate the public about the air pollution from indoor residential wood burning, such as the facts that wood burning is 90% PM2.5, particulate matter of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths. Wood burning emits 2.8 times the PM2.5 and CO2 as the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 as the fossil fuel natural gas burning. Even though natural gas stove owners are being urged to replace their natural gas stoves with electric stoves that have no PM2.5 or CO2 emissions, natural gas stoves can still serve as a cleaner bridge to electric stoves than the use of polluting wood burning for cooking. Natural gas furnaces can also serve as a cleaner bridge home heating alternative to wood burning, until all American households can switch to electric Heat Pumps that now work at temperatures down to 40 degrees below zero (Fahrenheit or Celsius, because the two temperature scales briefly converge at 40 degrees below zero). There are up to $8,000 rebates for Heat Pumps in 2024 and RAWSEP is writing a grant with the help of Expert Match at the Department of Energy to hand out free PurpleAir PM2.5 monitors to any near neighbor of an indoor residential wood burner whose PM2.5 wood smoke enters the near neighbor's yard and sickens them. The RAWSEP grant is also intended to provide additional subsidies to indoor residential wood burners who turn in their wood stoves for Heat Pumps. RAWSEP may also offer additonal subsidies for Heat Pumps to the near neighbors of indoor residential wood burners, in order to achieve the aim of creating clean communities. 1h)The Biden Factor. President Biden supported compensating victims of Military Burn Pits. The same wood burning pollution is created by indoor residential wood burning as wood burning pollution from a Military Burn Pit. The Biden Administration may eventually connect the dots between the similar forms of pollution, and the harm that burning wood pellets produced by Enviva created. 1i)The June 2023 incursion of wood burning wildfire smoke from Canada into the United States. Millions of Americans were told to stay inside their sealed homes and run air purifiers to avoid predictable illnesses or early deaths from PM2.5 pollution. That is how near neighbors of indoor residential wood burners have lived their lives in the shadow of predictable and avoidable pollution, if only wood were not burned to begin with. The negatives of using wood pellets instead of clean energy

for either recreation, cooking or home heating were more apparent than ever in June 2023. Commerce and attendance at work and schools was also interrupted, as well as wood smoke pollution causing flight delays. 1j)There are new alternatives for home heating in 2024, which are cheaper. Wind and Solar energy is now cheaper for consumers than any other form of home heating. Heat Pumps are viable at cold temperatures, and with rebates, are affordable to all Americans in 2024. Just as the fad of using ethanol from corn or other crops had its day, producing its own form of air pollution, now corn or other crop ethanol is planned to be replaced by electric cars in the near future, the fad among both the affluent and among the truly needy of polluting the air while wood burning (misleadingly misnamed biomass burning) has had its day of polluting, and will be replaced by true clean energy sources of wind and solar power distributed on an electric grid reaching all rural areas, allowing all homes in the United States to be heated by non-polluting and affordable Heat Pumps. 1K)RAWSEP View: 2015 critique of the unscientific theory of Carbon Neutrality of Wood Burning. New York Times Archive. Flawed Carbon Accounting Drives Boom in Burning U.S. Forests in E.U. Power Plants. 1)RAWSEP suggests that if Enviva tries to restructure, it should restructure as a Heat Pump manufacturer. North Carolina, Raleigh and Chapel Hill. Enviva Wood Pellet manufacturer declares bankruptcy, to restructure. Wood pellet maker Enviva declares bankruptcy, to restructure | Raleigh News & Observer Enviva's business model depends on policies in Europe and Asia that view burning wood pellets as less harmful to the environment than fossil fuels. World's largest biomass wood pellet producer files for bankruptcy Excerpts edited by RAWSEP for brevity, clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Southern Environmental Law Center. Enviva and other wood pellet manufacturers, use trees from Southern forests, turn them into pellets, and ship them overseas where they are burned (in biomass energy plants).. (Southern Environmental Law Center) Press Release. March 13, 2024. World's largest biomass wood pellet producer files for bankruptcy. Enviva, which operates polluting pellet plants across the South, made the announcement after months of financial problems. CHAPEL HILL, North Carolina. This week, Enviva, the world's largest producer of biomass wood pellets, declared Chapter 11 bankruptcy. The move comes after a months-long financial crisis that saw Enviva's stock price fall by more than 90 percent, leading to warnings that the company could soon be delisted from the New York Stock Exchange. "Enviva's financial collapse demonstrates what we have argued for years: the biomass energy industry is not financially viable," a senior attorney at the Southern Environmental Law Center, said. "Enviva's bankruptcy wasn't caused by just one or two bad contracts, it's because of a failing industry model that pollutes communities, hurts the climate, and is dependent on government handouts." Enviva and other wood pellet manufacturers, use trees from Southern forests, turn them into pellets, and ship them overseas where they are burned for power at utility scale. Biomass energy companies falsely claim burning trees for electricity is a clean energy source – in reality, the process emits more climate-warming carbon than burning coal. Enviva operates ten pellet plants in the southeastern U.S. and has proposed two more. Wood pellet facilities release huge amounts of air pollution, dust, and fine particulates that can cause asthma and respiratory illnesses in nearby communities. Enviva's facilities have frequently violated regulations, making them even more dangerous for nearby communities. The company has been assessed tens of thousands of dollars in fines in recent years for violating permits. The bankruptcy announcement comes as Enviva is attempting to get millions of dollars of public money through clean energy tax breaks created by recent federal climate legislation. "Enviva's bankruptcy makes it even more clear that the U.S. should not waste taxpayer dollars on the polluting and failing biomass industry. Betting on biomass is a bad investment, plain and simple." The financial crisis is due in part to Enviva being forced to internalize the environmental costs of its dirty operations, rather than pushing them off onto nearby communities. SELC, along with community partners across the region, have scored major victories against Enviva and other pellet companies, forcing them to install pollution controls and better protect people living close by. The Southern Environmental Law Center (S E L C) has offices in Asheville, Atlanta, Birmingham, Chapel Hill, Charleston, Nashville, Richmond, and Washington, D.C. southernenvironment.org 1K)RAWSEP View: 2015 critique of the unscientific theory of Carbon Neutrality of Wood Burning. New York Times Archive. Flawed Carbon Accounting Drives Boom in Burning U.S. Forests in E.U. Power Plants. https://archive.nytimes.com/dotearth.blogs.nytimes.com/2015/10/22/flawed-carbon-accounting-drives-boom-in-burning-u-s-forests-in-e-u-power-plants/?searchResultPosition=3 October 22, 2015. Excerpts edited by RAWSEP for brevity, clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. European demand for wood to burn in power plants is increasing exports from forests in the southeastern United States like these near Jacksonville, are forests an appropriate fuel source for power plants? (It is) infuriating (that the) flow of wood pellets from the Southeast, to European power plants is touted as carbon-neutral energy and helps country's meet emissions targets, at least on paper. But the

atmosphere isn't noticing, according to the analysis. This passage in part three of Climate Central's "Pulp Fiction" series describes the core issue with the European approach: Through a loophole in its clean energy regulations, all wood energy is treated as if it releases no carbon dioxide. (RAWSEP notes that this article from 2015 ignores PM2.5 particulate matter. When Carbon Emissions are ignored, the emissions of particulates from wood burning are also ignored). That accounting trick is allowing European national governments and their energy sectors to pump tens of millions of tons of greenhouse gases (and, RAWSEP notes, particulates) into the air every year, without accounting for it. That helps them keep that pollution off their books, but not out of the atmosphere. Part one explains the loophole: That loophole treats electricity generated by burning wood as a "carbon neutral" or "zero emissions" energy source — the same as solar panels or wind turbines. When power plants in major European countries burn wood, the only carbon dioxide pollution they report is from the burning of fossil fuels needed to manufacture and transport the woody fuel. European law assumes climate pollution released directly by burning fuel made from trees doesn't matter, because it will be re-absorbed by trees that grow to replace them. The assumption is convenient, but wrong. Climate science has been rejecting it for more than 20 years. It ignores the decades it can take for a replacement forest to grow to be as big as one that was chopped down for energy— or the possibility that it won't regrow at all. The assumption also ignores the loss of a tree's ability to absorb carbon dioxide after it gets cut down, pelletized and vaporized. An analysis by Climate Central finds nearly half of Europe's "renewable" energy comes from burning wood, a practice many scientists say is not carbon neutral. And Upton notes that the Europe Union's own science advisers raised concerns but were ignored: In 2011, the science committee of the EU's environment agency warned that the "bioenergy accounting error" had "immense" potential consequences for the planet's forests and climate. Attempts to introduce sustainability standards that could curtail the use of harmful wood energy across the EU have so far been blocked by Finland and Sweden. Those countries are poor in fossil fuel reserves but home to vast forests, which they harvest and burn for heating and electricity. About 100 wood pellet plantsoperate in those two countries alone.. New analysis by the Natural Resources Defense Council bolsters the Climate Central findings and focuses on the dizzying growth in this wood trade: Europe's forests are often highly regulated, so European power companies have had to look abroad to source wood fuel, turning to the largely unregulated forests of the American South for fresh supplies. Wood pellet exports from the United States doubled from 1.6 million tons in 2012 to 3.2 million tons in 2013. They increased again, by nearly 40 percent, from 2013 to 2014 and are expected to reach 5.7 million tons in 2015. Wood pellet manufacturing in the region is expected to continue skyrocketing, with production estimates as high as 70 million metric tons by 2020. Enviva, (is)the world's largest wood pellet manufacturer the United States. a spokesman for Eviva, sent these statistics putting its operations in broader context: Enviva shares the N.R.D.C.'s commitment to protecting Southern bottomland forests and we employ strong sustainable practices that do so. Wood pellet production accounts for less than 4 percent of the wood harvested in Southern forests every year. The amount of wood used in paper production declined by 25 percent from 1995 to 2010, dropping 400 million tons annually to 300 million tons. By contrast, the U.S. wood pellet industry will use an estimated 22 million tons of wood in 2017. The vast majority of wood used by Enviva's production plants in southeastern Virginia and northeastern North Carolina comes from upland forests and mixed stands. Enviva's facilities are certified by the Forest Stewardship Council™, (FSC®) Sustainable Forestry Initiative® (SFI)® , and the Programme for the Endorsement of Forest Certifications (PEFC). Since 2011, when Enviva opened the first of its three pellet production plants in southeastern Virginia and northeastern North Carolina, the region's 6.2 million acres of working forests have grown by 24,000 acres. There's more on the company's website. As far back as 2011, experts were increasingly "Questioning Europe's Math on Biofuels." In April, 2013, The Economist published a damning piece, "Wood: The fuel of the future," and subtitled "Environmental lunacy in Europe." Here's an excerpt: Which source of renewable energy is most important to the European Union? Solar power, perhaps? (Europe has three-quarters of the world's total installed capacity of solar photovoltaic energy.) Or wind? (Germany trebled its wind-power capacity in the past decade.) The answer is neither. By far the largest so-called renewable fuel used in Europe is wood. In its various forms, from sticks to pellets to sawdust, wood (or to use its fashionable name, biomass) accounts for about half of Europe's renewable-energy consumption. In some countries, such as Poland and Finland, wood meets more than 80% of renewable-energy demand. Even in Germany, home of the Energiewende (energy transformation) which has poured huge subsidies into wind and solar power, 38% of non-fossil fuel consumption comes from the stuff. After years in which European governments have boasted about their high-tech, low-carbon energy revolution, the main beneficiary seems to be the favoured fuel of pre-industrial societies. The expansion of the pellets-to-carbon-credit scheme has the feel of an energy rush akin to what happened in Pennsylvania in the

early days of the hydraulic fracturing boom and the destructive palm oil push that affected food prices. I'd like to see climate campaigners seek the same level of accountability and tough standards in this industry — and international carbon accounting — as they called for in gas drilling. I reached out to John Upton with a few questions. Here they are with his replies. Q. What led you to this particular angle? The U.K. pulp power issue is something that hasn't even attracted The Guardian despite its climate push of late? lack of reporting has led to a lot of confusion, even among experts, over what's really going on, which has led to confusion about what it all means for the climate. I had been pushing since I started at Climate Central a year ago. Q. In many areas, estimates of greenhouse impacts of different fuels are so murky that it's impossible to find a bedrock standard for comparisons. Are you confident the data here hold up? A. the science around biomass's climate impacts is much less murky than it's made to seem. The murkiness is a symptom of the fuzzy concept that forests regrow to absorb carbon emissions when their wood is burned for energy: once you start modeling that, you can basically pick whichever assumptions you want about time and space considerations, and ensure that you land at the conclusion that you were looking for. But two things became clear to me: Burning the wood pellets immediately releases more CO2 than coal (easy to figure out), and producing wood pellets for Europe's power plants is causing a lot of trees to be chopped down in the U.S. (surprisingly difficult to figure out), which immediately reduces carbon sequestration. I realized that the story here is that the E.U.'s "carbon neutral" designation of all biomass is flawed, rather than dragging readers around in the mud as scientists and talking heads debated a bunch of hypothetical situations. Q. Why do you think this persists given the clearcut data showing huge issues? A)It's clear that the European Commission and many politicians know that this is wrong, but there's been a lot of pressure from some nations to leave the carbon accounting loophole in place, because it's making it so much easier for everybody to hit their climate targets. I also think that the protracted E.U. debate over biofuels, which was only recently resolved, just wore out of a lot of European leaders, reducing their appetite for a potential biomass debate.  I can't find many scientists who say yes. Industry officials insist the scientific debate is not close to closed; a recent exchange of letters in Frontiers of Environment and Ecology demonstrates they're correct on this. That hasn't stopped Europe from claiming to cut its carbon footprint, at least on paper, by cutting and burning trees and doing so with wood pellets exported from the Southeastern United States.  In Episode 56RV 1)(above) North Carolina, Raleigh and Chapel Hill. Enviva Wood Pellet manufacturer declares bankruptcy, to restructure. A 2015 New York Times article about the pollution from wood burning enabled by the non-scientific political construct of Carbon Neutrality of Wood Burning.  2)United States. Wildfires. 3)California, Solano County, Fairfield. 4)Kentucky. EPA clean air rules to strengthen air monitoring. 5)Missouri, Johnson County, Lake Paradise. 6)New York, New York City. Pizzeria wood burning pollution. 7)Texas, cause of Panhandle wildfires investigated. 8)Vermont, Norwich and Casella. Blaze caused by wood burner called a big Dumpster fire.  9)Canada, British Columbia, Cowichan Valley.  Wood burning particulate matter (pollution) is more serious than CO2 (pollution). 10)Canada. British Columbia, Salt Springs. Heat Pumps to replace wood stoves. 11)Canada, Ontario, North Bay, Anishinabek Nation. RAWSEP View; Outdated cultural practice of wood burning  undeniably causes preventable air pollution. 12)United Kingdom, London. Underground tube staff impacted by PM2.5 dust.  13)Europe. A study finds PM2.5  health impacts and 253,000 early deaths. 14)Ukraine. The Russia-Ukraine conflict is found to impact PM2.5 air quality. 15)Africa, Ghana, Accra. Accra is Africa's 10th most polluted city.  16)China. China's air pollution rose in 2023 amid post-pandemic recovery. 17)Science Moms Newsletter. March 13, 2024. PM2.5 air pollution puts kid's lungs at risk.  2)United States. Wildfires. Students develop revolutionary system to detect wildfires before they spread - The Cool Down  smoke. The units are sensitive enough to detect the difference between cigarettes, wood smoke, and car exhaust. When the sensors pick up the signs. 3)California, Solano County, Fairfield. Grants available for converting wood-burning stoves, fireplaces | News | dailyrepublic.com  FAIRFIELD — Applications are being accepted for grants to replace wood-burning stoves or fireplace inserts to electric heat pumps.  4)Kentucky. EPA clean air rules to strengthen air monitoring. New EPA clean air rules to help strengthen air monitoring in KY - Public News Service  particulate matter, or PM 2.5, in the air. Through the Upper South and Appalachia Citizen Air Monitoring Project, Kentucky volunteers are using.  5)Missouri, Johnson County, Lake Paradise. Burning of brush ignited storage building fire near Lake Paradise - JG-TC.com  Burning wet wood produces smoke and creosote. Don't burn driftwood. The salt content in driftwood damages a chimney's structure. Avoid evergreen wood.  6)New York, New York City. Pizzeria wood burning pollution. New York Pizzerias Face Costly Dilemma Over Wood- and Coal-Burning Ovens Under New Rule  PMQ Pizza Magazine. Wood- and Coal-Burning Ovens Under New Rule. Mar 12 2024. Pizza News. This photo shows a man putting a pizza in a wood-fired oven.  7)Texas, cause of Panhandle wildfires investigated. Texas legislative committee to investigate cause of

Panhandle wildfires - Yahoo News UK On March 29, 2023, Jacquie Carmen, the college's interim deputy principal, fired Mr Wood for gross misconduct. Employment Judge Robert Childe. 8)Vermont, Norwich and Casella. Blaze caused by wood burner called a big Dumpster fire. Blaze at Norwich transfer station called 'big Dumpster fire' - AOL.com burning trash was extinguished, city and The fire was caused by a faulty vent pipe above a wood burner and started in the corner of the garage. 9)Canada, British Columbia, Cowichan Valley. Wood burning particulate matter (pollution) is more serious than CO2 (pollution). Particulate matter more serious than CO2 - Cowichan Valley Citizen Secondly, I like the smell of wood smoke and have no problem with wood burning. That being said I take issue with wood burning being a carbon. Burning of all fuels releases carbon dioxide into the atmosphere, along with particulate matter. Fuels, wood, coal, oil, gas or biomass all depend. 10)Canada. British Columbia, Salt Springs. Heat Pumps to replace wood stoves. Heat pump and wood stove rebate program back for 2024 - Gulf Islands Driftwood Wood-burning smoke is a big contributor to respiratory issues for many people, resulting in significant health impacts. 4. Financial Incentives. 11)Canada, Ontario, North Bay, Anishinabek Nation. RAWSEP View; Outdated cultural practice of wood burning undeniably causes preventable air pollution. Cultural Support Worker - Anishinabek News Given the traditional practices of the Anishinabek, from time-to-time exposure to wood smoke and the burning of sacred medicines, including. 12)United Kingdom, London. Underground tube staff impacted by PM2.5 dust. Largest study explores impact of dust on Tube staff - Imperial College London Imperial College London. The research, led by Imperial College London, found that staff who worked in areas with higher levels of fine dust – called particulate matter (PM2.5). 13)Europe. A study finds PM2.5 health impacts and 253,000 early deaths. Population exposure to multiple air pollutants and its compound episodes in Europe Nature. In 2021, the European Environment Agency (EEA) estimated over 253,000 premature deaths attributed to fine particulate matter (PM2.5), 52,000 deaths to. Air quality in Europe shows significant improvements over the last two decades, study finds Phys.org The results, published in Nature Communications, show that overall suspended particulate matter (PM2.5) levels. 14)Ukraine. The Russia-Ukraine conflict is found to impact PM2.5 air quality. The Impact of Russia-Ukraine geopolitical conflict on the air quality and toxicological Nature. particulate matter (PM2.5, dp < 2.5 μm) emissions. PM2.5 samples were analyzed for their chemical composition and assessed for their oxidative. 15)Africa, Ghana, Accra. Accra is Africa's 10$^{th}$ most polluted city. Accra is Africa's 10th Most Polluted City – 2023 World Air Quality Report - MyJoyOnline The average PM 2.5 readings, a crucial indicator of air pollution, have been steadily rising. In 2023, the PM 2.5 reading soared to 33.2 μg/m$^3$, 16)China. China's air pollution rose in 2023 amid post-pandemic recovery. China's Air Pollution Rose Last Year Amid Post-Pandemic Economic Recovery Caixin Global. China's annual average PM 2.5 concentration rose last year as fewer cities met the national standard for fine particle air pollution, according to. 17)Science Moms Newsletter. March 13, 2024. **Extreme Weather:** We are watching our fellow Americans in Texas and wishing the best for everybody in the wake of the recent fires. Multiple wildfires surged across the Texas Panhandle, leaving hundreds of thousands of scorched acres in its wake. Gov. Abbott has issued a disaster declaration for 60 counties as Texans were asked to evacuate and some left with no safe exit are being forced to shelter in place. For moms nearby, it's important to remember our kids' developing lungs are uniquely vulnerable to wildfire smoke. If possible, try to keep your kids inside, and use any air filtration you have available to help protect their health. **Pollution puts kids' lungs at risk:** Kids' lungs are uniquely vulnerable to climate change's impacts, like air pollution. Our lungs don't reach full maturity until our early 20s, which puts kids at a higher risk for developing asthma. As our climate heats up kids are exposed to more pollution, including smoke from larger wildfires. Our kids deserve cleaner air and a healthier future. Protect their health. Later Is Too Late.


Thousands Tons of Oil Equivalents
200,000
150,000
100,000
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1990
1995
2000
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2010
All Renewable Energy
Biomass (mostly wood)
CLIMATE CENTRAL