

Episode 56UL June 5, 2024. Electric Cars Becoming Affordable. Africa & India PM2.5 from wood stoves.

In Episode 56UL, 1) Electric Cars Are Suddenly Becoming Affordable. RAWSEP View: Electric cars (that replace PM2.5 polluting gas powered cars) and electric Heat Pumps (that replace PM2.5 polluting indoor residential wood burning for home heating) are similar because they are both solutions to PM2.5 air pollution that causes human health problems and early human deaths as well as hastening climate change. 2)Alabama, Dothan. Renewable bioenergy plant holds grand opening in Dothan. RAWSEP View: This headline shows that the definition of renewable applied to wood burning is misleading. A renewable label suggests that an energy source, such as wood burning, is good for the environment. 3)New York, Hudson Valley, Oyster Bay. Ozone Shifts North: Air Quality Advisory Issued For Hudson Valley, Oyster Bay, RAWSEP View: This advisory is for both ozone and PM2.5 pollution. 4)Ohio. Air Quality Advisory issued in Northeast Ohio: What to know. FOX 8 News. Stay inside; Wear an N95 mask; Don't burn candles or use wood-burning stoves. 5)Pennsylvania, Lehigh Valley. Lehigh Valley Breathes: How temperature, wind affect fine particle pollution. The Lehigh Valley Breathes project will distribute and install 40 PurpleAir monitors throughout the valley to measure particulate pollution. There are also two Government EPA Regulatory Monitors already in the area (in Freemansburg and East Allentown, Pennsylvania which do not provide highly localized information). 6)New Zealand, Napier and Hastings. Outdoor Burning Ban For Napier And Hastings. 7)United Kingdom, Scotland. BBC Have wood burning stoves been banned in Scotland? 6 days ago. Scotland. RAWSEP View: This headline asking if wood burning stoves have been banned in Scotland is misleading. There is no question that the legislation that wood burning stoves have been banned in new construction has passed the Scottish Parliament and is effective as of April 1, 2024. The fact that the Scottish government is responding to pushback from Scottish Parliament Conservatives is not a U-Turn as the Conservatives, who are pushing back, term it. RAWSEP View. Two points: 1)Look at the half measures that countries in Africa, and that India, are forced to take because there is not protective legislation such as this. Does Scotland want to make a U-Turn and deprive the Scottish people of protection from certain pollution from wood stoves, when legislation can make the air cleaner, by one stroke? 2)Crying wolf when there is no harm from this legislation, only help, including government help in obtaining low cost or no cost Heat Pumps to take the place of wood burning stoves, and when there is no U-Turn reversing the legislation, makes the Conservatives who say this is a U-Turn look like absurd fantasists, infantile fantasists, stuck on promoting a polluting tradition for no good reason. This backlash is backward. 8)United Kingdom, Scotland. Tory candidate hits out at SNP woodburning stove ban bid. 9)Israel. Electric Fireplace instead of wood burning Fireplace. 10)Africa, Kenya and Nigeria. Kenya seeks to shift towards clean cooking fuels. RAWSEP View: A shift to Liquified Petroleum Gas (LPG) for household cooking, away from wood burning by 2028. Voice of Nigeria. "It is not only carbon monoxide but one of the biggest problems is particulate matters. The particulate matters are the ones we usually call PM 2.5, 11)Africa, Uganda (video) and Washington, Yakima. Innovative construction: Burning calories instead of wood. 12)India, Bihar. Women Entrepreneurs in Bihar Help Improve Air Quality through Cleaner Cookstoves. RAWSEP View: The long-term solution is large scale access to Liquified Petroleum Gas (LPG) or electric stoves, but this improvement away from traditional highly polluting wood stoves is a first step. Unfortunately, this is still a biomass burning stove, although less polluting. World Bank Blogs. Smoke from wood and cow dung burning cookstoves contributes significantly to the problem. Although Bihar, one of India's poorest states, has seen. As giving large-scale access to LPG or electric stoves may take time, the government of Bihar is addressing the issue in the short term by boosting the use of cookstoves that use far less biomass and emit very little smoke. 13)India, Chennai. Chennai's air quality dips during Bhogi. RAWSEP View: "Bhogi" comes from the Sanskrit word "Bhog," which denotes pleasure and gluttony. The main purpose of Bhogi Pongal is to honor Lord Indra, the god of rain, and it represents the discarding of useless items to make room for a new beginning and crop. RAWSEP View: Apparently Bhogi is when more solid fuel burning takes place and therefore more PM2.5 air pollution needlessly occurs. Because of the traditional, authoritarian from above, social contract the people of Chennai have to burn

solid fuels during Bhogi. 14)India. Heatwave key reason for high air pollution in city. 15)India, Lucknow. Hot weather made pre-monsoon air more polluted in capital. 1)New York Times. June 3, 2024. Electric Cars Are Suddenly Becoming Affordable. RAWSEP View: Electric cars (that replace PM2.5 polluting gas powered cars) and electric Heat Pumps (that replace PM2.5 polluting indoor residential wood burning for home heating) are similar because they are both solutions to PM2.5 air pollution that causes human health problems and early human deaths as well as hastening climate change. Wood burning emits 90% PM2.5, particulates of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems and early deaths. Price of electric cars and price of Heat Pumps is lowered by government tax incentives for electric cars and government rebates for Heat Pumps that work down to 40 degrees below zero, in 2024. This article takes into account the government incentives in calculating the real cost of electric vehicles. The article also concludes that “Electric vehicles are quieter than gasoline models, better for the environment, and faster because an electric motor generates instant torque. The car is more fun than whatever they’re driving now,” What RAWSEP sees are the key arguments for driving an electric car or truck by 2030 or 2033: 1)By 2030 or 2033 electric car prices will be close to gas powered car prices, electricity is almost always cheaper per mile than gasoline, battery-powered cars don’t need oil changes, nor engine air filters or spark plugs. This article concedes that: Electric cars are still more expensive than gasoline models, costing an average of \$55,252 in the United States in April. But cars and sport-utility vehicles capable of traveling 400 miles on a full battery will cost less than cars with internal combustion engines in 2030, even before taking into account government subsidies. (Pickup trucks will not achieve parity for 400-mile models until 2033.) Some automakers are offering strong discounts on E.V. models. Prices are falling because of increased competition, lower raw-material costs and more efficient manufacturing. “Now you’re starting to see us transition to a mass market.” Later in 2024 General Motors will sell an electric version of its Chevrolet Equinox with a 300-mile range. It will sell for less than \$30,000 after the \$7,500 federal tax credit. And the company plans to sell an even cheaper car, a new Chevrolet Bolt, next year. In New Hampshire a used Chevy Bolt recently sold for \$15,000. After applying a federal tax credit for used electric vehicles, the price was \$11,000. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. More efficient manufacturing, falling battery costs and intense competition are lowering sticker prices for battery-powered (electric car) models to within striking distance of gasoline cars. An electric car dealer in Salt Lake City has seen a change over the last year in the kinds of customers coming in. “We’re seeing younger people and more blue-collar and entry-level white-collar people. The purchase price of the car has suddenly become in reach.” Recently, customers have been snapping up used Teslas for \$20,000, after applying a \$4,000 federal tax credit. Federal tax credits of up to \$7,500 for new electric cars, augmented by thousands of dollars in state incentives, push prices even lower. Carmakers including Tesla, Ford, General Motors and Stellantis, the owner of Jeep, have announced plans for electric vehicles that would sell new for \$25,000. Cars that can travel more than 300 miles on a fully charged battery are becoming common, and charging times are dropping below 30 minutes. The number of fast chargers, which can top up a battery in less than half an hour, grew 36 percent from April 2023 to April 2024. President Biden wants to shield American producers of electric vehicles from cheaper Chinese options. Chinese lithium-ion batteries will become more expensive because the Biden administration announced in May that it would raise tariffs on them to 25 percent from 7.5 percent. While prices are trending downward, there are risks. China supplies half the lithium-ion batteries used in electric cars sold in the United States. 2)Alabama, Dothan. Renewable bioenergy plant holds grand opening in Dothan. RAWSEP View: This headline shows that the definition of renewable applied to wood burning is misleading. A renewable label suggests that an energy source, such as wood burning, is good for the environment. Wood is renewable in the sense that a tree can be planted in the place of a burned or felled tree. But a newly replanted tree takes decades or centuries to grow to the size of the felled tree, and so the tree grows for decades or centuries before it can absorb the amount of CO2 that the felled tree absorbed through photosynthesis. Most importantly for Residents

Against Wood Smoke Emission Particulates, the replanted tree, as any tree, does not absorb PM2.5, particulates of 2.5 micrometer size, that are the kind of pollution that makes up 90% of wood burning emissions, wood burning emissions including those from bioenergy (wood burning) power plants such as the one which this headline announces is opening. This opening of a new polluting source in Alabama is no cause for celebration, since it increases pollution that leads to adverse health problems and early deaths, and hastens climate change, rather than using the truly clean renewable energy sources of wind and solar. WTVY Wood pellets made at. 3)New York, Hudson Valley, Oyster Bay. Ozone Shifts North: Air Quality Advisory Issued For Hudson Valley, Oyster Bay, RAWSEP View: This advisory is for both ozone and PM2.5 pollution. NY Patch. reduce or eliminate outdoor burning and attempt to minimize indoor sources of PM 2.5 such as smoking. DEC and DOH issue Air Quality Health. 4)Ohio. Air Quality Advisory issued in Northeast Ohio: What to know. FOX 8 News. Stay inside; Wear an N95 mask; Don't burn candles or use wood-burning stoves; Avoid secondhand smoke. 'I about passed out' 5)Pennsylvania, Lehigh Valley. Lehigh Valley Breathes: How temperature, wind affect fine particle pollution. The Lehigh Valley Breathes project will distribute and install 40 PurpleAir monitors throughout the valley to measure particulate pollution. There are also two Government EPA Regulatory Monitors already in the area (in Freemansburg and East Allentown, Pennsylvania which do not provide highly localized information). Lehigh Valley News. As we develop a better understanding of how PM 2.5 pollution is distributed in the Lehigh Valley using the LVBreathes air monitors, this research on. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Lehigh Valley Breathes is a project led by Lehigh and Northampton Counties to obtain and communicate localized information about particulate air pollution in the Lehigh Valley. The primary purpose is to provide policy makers and citizens with information needed to help improve the air we all breathe. The project is designed to enable and engage citizens in learning about air quality and participating in decisions that affect air quality. Currently, air quality information in the Valley comes from two monitoring sites located in Freemansburg and East Allentown that are used by the PA Department of Environmental Protection (DEP) to make sure that the region complies with the federal Clean Air Act. While these sophisticated monitors are capable of measuring a variety of air pollutants that are used to determine the [Air Quality Index \(AQI\)](#), they do not tell us how air pollution is distributed throughout Lehigh Valley. The Lehigh Valley Breathes project will distribute and install 40 PurpleAir monitors throughout the valley to measure particulate pollution, which is commonly referred to as “PM2.5” and poses a serious health risk for humans and the environment. These small and inexpensive air monitors can be easily positioned in different locations, providing a highly-localized understanding of air quality that the state’s two centralized air monitors cannot. By increasing the locations where PM 2.5 pollution is measured, the data will provide a more accurate understanding of how PM 2.5 is impacting the health of citizens in different parts of the Valley. And because the data provided by the PurpleAir monitors are available 24/7 on an easily accessible and dedicated website, Lehigh Valley residents can check on the air quality in their own neighborhoods. 6)New Zealand, Napier and Hastings. Outdoor Burning Ban For Napier And Hastings. Scoop. This includes only burning dry garden vegetation, dry and untreated wood, and paper and cardboard that has come from the same property. “Before” 7)United Kingdom, Scotland. BBC Have wood burning stoves been banned in Scotland? 6 days ago. Scotland. Concerning Scotland National Party (SNP) Head, John Swinney. RAWSEP View: This headline asking if wood burning stoves have been banned in Scotland is misleading. There is no question that the legislation that wood burning stoves have been banned in new construction has passed the Scottish Parliament and is effective as of April 1, 2024. The fact that the Scottish government, currently the Scottish National Party (SNP), is responding to pushback from Scottish Parliament Conservatives is not a U-Turn as the Conservatives, who are pushing back, term it. RAWSEP View. Two points: 1)Look at the half measures that countries in Africa, and that India, are forced to take because there is not protective legislation such as this. Does Scotland want to make a U-Turn and deprive the Scottish people of protection from certain pollution from wood stoves, when legislation can make the air cleaner, by one stroke? 2)Crying wolf when there is no harm from this

legislation, only help, including government help in obtaining low cost or no cost Heat Pumps to take the place of wood burning stoves, and when there is no U-Turn reversing the legislation, makes the Conservatives who say this is a U-Turn look like absurd fantasists, infantile fantasists, stuck on promoting a polluting tradition for no good reason. This backlash is backward. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. New rules came into place at the start of April that broadly ban wood burning stoves from new-build homes. The Scottish government will review a new law on wood burning stoves after calls for a rethink. Almost two months later, ministers are now looking to "adapt" the regulations to "suit the differing needs of urban and rural areas". A)The reporter for this article restated the law which has existed since April 1, 2024, and the reasons for the law. The government said heating homes contributed to about a fifth of Scotland's carbon emissions, and that needed to be tackled. What are the new regulations? Wood burners are appliances such as wood burning stoves, fireplaces, and firepits that are used to burn wood in our homes or gardens, usually for heating or cooking. From 1 April, new homes built in Scotland will not be allowed to use direct emission heating systems such as oil and gas boilers, and bioenergy sources which includes wood and log burning stoves. New properties will need to use "climate-friendly alternatives" such as heat pumps or heat networks. Heat pumps needed at 'much faster rate' – watchdog How will we heat homes in zero carbon Britain? The rules also apply to those looking to convert an existing property. A conversion relates to changing the occupation or use of a building, for example turning an attic into a bedroom, and is different from making alterations or adding an extension. Newly-built houses will not be allowed to have wood burning stoves installed. The regulations have no impact on homes that already have a wood burning stove installed however the government is developing proposals for existing buildings. There are some exemptions including if the heating system is being installed as an emergency heating system or for the purpose of frost protection. Environmental impact. The Scottish government said the new regulations were introduced in an effort to reduce the country's carbon emissions. Its independent advisers on the Climate Change Committee recently warned that a flagship target of reducing greenhouse gas emissions by 2030 was unachievable. However, the government is still "fully committed" to meeting a target of net zero emissions by 2045. A spokesperson said: "Heating our homes and buildings represents about a fifth of Scotland's carbon emissions so tackling the climate emergency requires us to address these emissions. "The changes mean that new homes and buildings do not contribute to climate emissions, by banning the use of polluting heating systems such as oil and gas boilers, and bioenergy - including wood burning stoves." Log burners are often viewed as a more sustainable heating method because they do not rely on fossil fuels such as oil or coal. However, using a stove or open fire at home is a major contributor of a pollutant called fine particulate matter, which can cause damage to lungs and other organs. B)The following sentences from this article list the arguments of Scottish Parliament Conservatives made to the reporter. B1)The Conservative argument that wood burning is a viable backup during electrical power cuts, such as during extreme weather events. Coupled with the Conservative argument that wood burning is cheaper than Heat Pumps that work down to 40 degrees below zero, subsidized by the Scottish government. The Conservative points: Some in rural areas of Scotland rely on wood burning stoves, including during power cuts. One Scottish Parliament Minister said she was seeking "urgent clarification" because she had concerns for "older residents who rely on them during a time of crippling energy price rises". RAWSEP View: Electrical grids can be extended to all rural areas by the Scottish government. The Scottish government already provides economic incentives for Heat Pumps. B2)On social media from the Island of Eigg one social media account (which) posted that banning wood burning stoves would be a "disaster" wrote "[The stoves] are a key part of our net zero by 2030 strategy. Practical and cheap to fit compared to heat pumps. They provide hot water in winter when solar thermal can't. Island timber harvesting provides local affordable fuel and jobs." RAWSEP View: This Social Media Commenter is referring to the scientifically debunked political theory of Carbon Neutrality of Wood Burning. This unscientific theory holds that because a tree can be planted in the place of a felled and burned tree, the energy produced by

burning wood is dubbed renewable. The scientifically debunked part of this theory is that the emissions from wood burning can be ignored because within the decades or centuries it takes for the tree to reach the stature of the felled tree, the PM2.5 and CO2 emissions of the wood burning can be ignored, because eventually the CO2 will be absorbed by the eventual full size tree replacement. As stated before in this episode, PM2.5 is never absorbed by trees, full size or not. CO2 is eventually absorbed at previous levels by a full-size replacement tree, through the process of photosynthesis, but as stated before, this takes decades or centuries, and in the meantime, PM2.5 and CO2 are emitted by wood burning, in reality.

B3)The Scottish government said wood burners can still be installed in new homes where a "need can be justified" following feedback from rural communities. RAWSEP notes that this flexibility is already written into the existing, April 1, 2024, law calling for a wood stove ban in new construction in Scotland. The Scottish government should not throw up its hands and permit polluting wood burning without coming up with economical government solutions to provide Heat Pumps which work down to 40 degrees below zero and provide electrical grids which extend to all rural areas. The PM2.5 and CO2 emissions that hasten Climate Change, and contribute to harmful weather events and wildfires, come in large part in Scotland from unnecessary indoor residential wood burning, as Scotland's statistics used to justify this legislation show. B3)Conservatives described their backlash to the law, and the government's willingness to listen to their specious arguments against this first step in needed legislation to control air pollution as a "screeching U-Turn" by the government. Such language is good for inserting into headlines that sell newspapers, but this use of the Conservative gratuitous and misleading phrase is misleading in itself. The article itself states "'Screeching U-Turn'. On 28 May, Climate Action Minister Gillian Martin told Holyrood she would adapt the New Build Heat Standard regulations to suit the differing needs of urban and rural areas. Minister Martin stated that she had been "listening to the concerns raised" and she would look to adapt the legislation to address "issues of inflexibility". She said: "The outcome of this review will ensure resilience to interruptions of electricity and heating supply." RAWSEP View: The common sense government response to this backlash based on the fact that there may be power outages in rural areas would be to strengthen electrical grids, provide incentives and rebates for electrical power cutoff backups that are less polluting than wood burning (such as natural gas generators since wood burning emits 450 times the PM2.5 as natural gas burning), and educate the public about the pollution from wood burning that leads to electrical power cutoffs due to extreme weather events contributed to by indoor residential wood burning PM2.5 and CO2 emissions themselves. B4)The Scottish Conservatives described the government response to them, and government announcement, as a "screeching U-Turn" from the government and the Conservatives repeated calls for the ban to be reversed entirely. RAWSEP View: The Scottish government listened to and responded to the illogical arguments against the Scottish government's needed law to ban wood burning stoves in new construction. The Conservatives heard only that the government heard them. Conservatives went on to describe the measured response of the Scottish government as a U-Turn, because that is how the Conservatives wanted to characterize it, and the Conservatives fed their narrative to this newspaper. The Conservatives remain unconcerned with the health improvements and slowing of Climate Change this legislation, banning wood stoves in new construction, represents. 8)United Kingdom, Scotland. Tory candidate hits out at SNP woodburning stove ban bid. Irvine Times. Conservative candidate for North Ayrshire and Arran Todd Ferguson calls on SNP to fully reverse their ban on the installation of woodburning. 9)Israel. Electric Fireplace instead of wood burning Fireplace. PuraFlame Electric Fireplace Review: Cozy and Realistic. Ynetnews wood-burning fireplace. The supplemental heat is perfect for our medium-sized living room, though it's not meant to be the main heat source. 10)Africa, Kenya and Nigeria. Kenya seeks to shift towards clean cooking fuels. RAWSEP View: A shift to Liquefied Petroleum Gas (LPG) for household cooking, away from wood burning by 2028. Voice of Nigeria. "It is not only carbon monoxide but one of the biggest problems is particulate matters. The particulate matters are the ones we usually call PM 2.5, Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. The Kenyan government has embarked on an ambitious journey to

transition households from biomass to Liquefied Petroleum Gas (LPG) for household cooking. This shift aims to elevate the percentage of Kenyan households relying on LPG from 70 percent to 100 percent by 2028. 11)Africa, Uganda (video) and Washington, Yakima. Innovative construction: Burning calories instead of wood. KNDU CO2 emissions from buildings and construction hit a new high, knocking the sector off track to decarbonize by 2050. A sustainable brickmaking technology being used in Uganda offers a glimmer of hope for its beleaguered forests. 12)India, Bihar. Women Entrepreneurs in Bihar Help Improve Air Quality through Cleaner Cookstoves. RAWSEP View: The long-term solution is large scale access to Liquefied Petroleum Gas (LPG) or electric stoves, but this improvement away from traditional highly polluting wood stoves is a first step. Unfortunately, this is still a biomass burning stove, although less polluting. World Bank Blogs. Smoke from wood and cow dung burning cookstoves contributes significantly to the problem. Although Bihar, one of India's poorest states, has seen. As giving large-scale access to LPG or electric stoves may take time, the government of Bihar is addressing the issue in the short term by boosting the use of cookstoves that use far less biomass and emit very little smoke. Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates, a 501c3 nonprofit organization. Since reducing air pollution is a priority for the World Bank, the Bank supported a pilot project that mobilized women from Bihar's successful self-help group movement (JEEVIKA) to market, sell, and service these improved cookstoves among local communities. The pilot, which ran from 2021-2022, was carried out in cooperation with The Energy and Resources Institute (TERI), JEEVIKA and the Bihar government's Department of Rural Development. Initially, 25 women from 5 districts were trained to become successful entrepreneurs in this traditionally male-dominated sector. The women, equipped with skills in marketing, product demonstration and after-sales service, began selling improved cookstoves through small, specially established women-run solar marts – called Uttam Urja Kendras. Till 2024, 372 women-run solar marts had sold 50,000 improved cookstoves across 15 of the 38 districts in the state. And their numbers keep growing. 13)India, Chennai. Chennai's air quality dips during Bhogi. RAWSEP View: "Bhogi" comes from the Sanskrit word "Bhog," which denotes pleasure and gluttony. The main purpose of Bhogi Pongal is to honor Lord Indra, the god of rain, and it represents the discarding of useless items to make room for a new beginning and crop. RAWSEP View: Apparently Bhogi is when more solid fuel burning takes place and therefore more PM2.5 air pollution needlessly occurs. Because of the traditional, authoritarian from above, social contract the people of Chennai have to burn solid fuels during Bhogi. MSN pm on Saturday, the air quality index was 137. At 5 micrograms per cubic meter, PM2.5 which is a tiny particulate matter of diameter 2.5 or less than 2.5 microns that can enter (the human lung, causing a cascade of human health problems and early death). 14)India. Heatwave key reason for high air pollution in city: Report. Hindustan Times. The 24-hour average concentrations of PM10 and PM 2.5 in the city in April and May were 118.8 and 85.9  $\mu\text{g}/\text{m}^3$ , 15)India, Lucknow. Hot weather made pre-monsoon air more polluted in capital: IITR report. Lucknow News. Times of India, PM 10 and PM 2.5 concentrations exceeded the safe limits set by National Ambient Air Quality Standards (NAAQs).