# White: Are Texas power plants the cleanest or the dirtiest?

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BY KATHLEEN HARTNETT WHITE

A recent report by Environment Texas claiming Texas power plants are the "dirtiest" in the nation because they emit the most carbon dioxide begs for qualification. Although the EPA has declared carbon a pollutant, CO2 in the air that surrounds us lacks the defining characteristic of what is both legally and commonly understood as a pollutant: measurable harm to humans. Indeed, when considering genuine pollutants that can endanger human health, Texas power plants – including those fueled by coal – are among the cleanest.

Carbon dioxide is what remains when electric generating fuels such as coal or na gas are fully consumed. Unlike conventional pollutants, CO2 cannot be reduced or eliminated by technol like scrubbers. No surprise to physicists and chemical engineers, carbon capture technologies are n mmercially viable at scale. As long as the Texas industrial sector remains robust, Texas power plants v nit, in the aggregate, a relatively large volume of CO2, because the Texas industrial sector has a far highe demand for electricity

than other states.

Heat, perhaps more than population, accounts for a big share of electric demand in Texas compared to a state like California with a milder climate. According to the National Oceanic and Atmospheric Administration, Texas has almost 2 1/2 more "heat" days in need of air-conditioning – and thus energy consumption – than California. But it is the energy intensity of the Texas economy that accounts for almost half this state's consumption of electricity.

Unlike any other state, nearly half of Texas' electricity use is for industry. As the second most populous state, with a long, hot summer, the most robust economy and the largest, energy-intensive industrial sector, Texas, of course, consumes far more electric power and thus emits more carbon dioxide than other states.

Texas is the energy breadbasket of the entire country. This state produces half of the country's petroleum and natural gas, more than 25 percent of all the transportation fuels, 60 percent of all the chemicals, and a sizable share of heavy metal manufacturing. When downstream manufacturing and upstream energy extraction are combined, Texas now has the largest industrial sector in the nation. And these Texas energy products require an energy intensive process that consumes lots of electricity. Texas uses energy to produce a cornucopia of energy-laden products sold across the nation and the world. An incomparable wonder of energy-dense fossil fuels is that their energy input can yield greater energy output. That's called productivity-creating economic growth.

The fleet of coal-fired power plants in Texas is among the youngest and cleanest in the country in terms of the conventional pollutants. Newer plants operate more efficiently and are equipped with a wide array of technologies that reduce emissions such as ozone-producing nitrogen oxides and sulfur dioxide by orders of magnitude. Texas power plants are among the lowest emission rates for these pollutants.

A state law known as the grandfathered facilities bill catalyzed retrofits on older plants that also reduce emissions. Although there are no commercially practicable technologies to capture CO2, market drivers to increase efficiency (and thus cost) have led to major CO2 reductions. According to the EPA, coal-fired plants have reduced CO2 emissions by 23 percent from 2005 levels, exceeding the goal of a 17 percent reduction espoused by the Obama administration.

Texas' competitive electric market has also played a key role in increasing energy efficiency and reducing air emissions. Both have led to a decrease in CO2 emissions from our power plants. According to the Energy Information Administration, energy-related CO2 emissions are now the lowest in the U.S. since 1994.

However labeled by activists and officials, CO2 is unlike the air contaminants regulated for the past 40 years. The Clean Air Act's mission is to protect human health from harmful ambient concentrations and exposures of pollutants. Ambient refers to the air humans breathe - what surrounds us now at ground levels, not atmospheric accumulations 30 to 50 years in the future as predicted by the official science of the United Nations' Intergovernmental Panel on Climate Change.

Lest we educate a generation of children to be fearful of CO2, consider that OSHA sets a safety threshold for breathing CO2 at a concentration more than ten times the current estimate for atmospheric CO2. Natural processes create about 200 billion tons of CO2 per year. Man-made CO2 emissions may generate about 7 billion tons. Have we forgotten that CO2 is a ubiquitous component of the natural process photosynthesis, on which all life depends?

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What about Mercury emissions? Extremely harmful to the public health in miniscule amount and a significant air pollutant. TX has some of the most harmful in actual tons released and per emission rate.

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