

Burning natural gas is now more dangerous than coal in Illinois, study shows

May 5 2021, by Michael Hawthorne, Chicago Tribune



Credit: CC0 Public Domain

Pollution from natural gas is now responsible for more deaths and

greater health costs than coal in Illinois, according to a new study highlighting another hazard of burning fossil fuels that are scrambling the planet's climate.

Researchers at Harvard University found that a shift away from coal during the past decade saved thousands of lives and dramatically reduced [health impacts](#) from breathing particulate matter, commonly known as soot. But the numbers declined only slightly for gas, another fossil fuel that by 2017 accounted for the greatest [health](#) risks.

About half the deaths from soot exposure that year can be attributed to the state's reliance on gas to heat homes and businesses, the study found. Coal is more deadly only when used to generate electricity.

The alarming findings raise questions about whether Gov. J.B. Pritzker's proposed transition to a zero-carbon economy would move fast enough in phasing out the use of gas—not only to blunt the impacts of climate change but also to ensure Illinoisans breathe clean air.

Chicago appears to be locked into a gas-dependent future. Peoples Gas is charging its customers \$7.7 billion during the next two decades to replace aging distribution lines throughout the city, even though an accelerating shift to [renewable energy](#) could make the project obsolete before it's completed.

"What the Harvard researchers found shows we need to stop burning things," said Brady Anne Seals, manager of the carbon-free buildings program at the Rocky Mountain Institute, a nonprofit research group that helped finance the pollution study. "We don't have the luxury of time any more to meet our climate goals. Then there are these health impacts people are feeling right now."

Soot is considered one of the most harmful forms of air pollution, in

particular tiny particles invisible to the human eye that can lodge deep in the lungs and penetrate the bloodstream. Breathing even small amounts can inflame the lungs and trigger asthma attacks, researchers have found. Multiple studies link soot exposure with heart attacks and premature death.

For their new study, the Harvard researchers plugged data from federal emissions inventories into computer models used to estimate deaths and costs from soot in every state.

In 2008, emissions from coal triggered the most deaths and imposed the largest share of health care costs nationwide. But by 2017, the scientists found, coal, gas and the burning of wood and other plant material shared the burden equally.

Illinois is one of 19 states where gas emissions led to more deaths than coal that year, according to the study, published Wednesday in the journal *Environmental Research Letters*. The analysis estimated that soot pollution from burning gas caused as many as 2,100 deaths and triggered up to \$24 million in hidden health costs for Illinoisans in 2017.

What surprised the Harvard team the most was a sharp increase in deaths and health care costs nationally from soot pollution emitted by industrial boilers burning plant material known collectively as biomass.

"Swapping out one combustion fuel for another is not a pathway that's going to get us to a healthy energy system," said the lead author, Jonathan Buonocore, an environmental health researcher at the Harvard T.H. Chan School of Public Health.

Natural gas already is being targeted by climate activists who persuaded Seattle and more than 40 cities in California to restrict its use in new buildings. The Harvard study marks the first time researchers have found

that deaths and health care costs from gas emissions are equal to or exceed damages from coal, providing the burgeoning anti-gas movement with new information to help persuade policymakers and the public.

Industry officials are pushing back. They've successfully lobbied several Republican-led states to preemptively block municipal gas bans, and commissioned their own research claiming that heating homes and businesses with electricity would drive up energy costs.

"Policies that would force people to replace their [natural gas](#) appliances with electric ones could be burdensome to consumers and to the economy, have profound impacts and costs on the electric sector and be a very costly approach for a relatively small reduction in emissions," the American Gas Association said in a statement.

Peoples Gas didn't address the health impacts of its product but said its pipe replacement is reducing climate pollution by preventing leaks. Its [parent company](#), Wisconsin-based WEC Energy Group, plans to invest \$4 billion in clean energy projects by 2025, the gas supplier said in a statement.

"We look forward to a bright, sustainable future," the statement concluded. "We just need to make sure that in that future, and every step that leads to it, Chicagoans and the businesses where they work have safe, reliable, affordable heat."

President Joe Biden is calling for carbon-free electricity by 2035 and net-zero emissions throughout the economy by 2050. Pritzker unveiled legislation last week that would phase out the state's remaining coal-fired power plants by 2030 and gas-fired [power plants](#) by 2045, but the governor's measure does not directly address the impact of burning gas in homes and businesses.

Howard Learner, executive director of the nonprofit Environmental Law and Policy Center, said it would be impossible to rapidly abandon gas because more than 90% of Chicago homes are hooked up to the Peoples Gas distribution network. But federal and state leaders could sharply reduce demand by requiring more efficient furnaces and water heaters, he said, and by providing incentives to install solar panels on commercial buildings and homes.

"Electrification will only lead to cleaner air if our state is powered by carbon-free electricity," Learner said. "If we can make our homes and businesses more energy efficient, that would save people money, reduce pollution and keep money in the local economy."

2021 Chicago Tribune. Distributed by Tribune Content Agency, LLC.

Citation: Burning natural gas is now more dangerous than coal in Illinois, study shows (2021, May 5) retrieved 26 April 2024 from <https://phys.org/news/2021-05-natural-gas-dangerous-coal-illinois.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.