Don’t Let a Killer Pollutant Loose

The Trump administration is moving to ease standards on a particularly deadly air contaminant.

By John Balmes
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PM 2.5 kills people. There has been little dispute that microscopic particulate matter in air pollution penetrates into the deepest parts of the lungs and contributes to the early deaths each year of thousands of people in the United States with heart and lung disease.

One recent study called PM 2.5 “the largest environmental risk factor worldwide,” responsible for many more deaths than alcohol use, physical inactivity or high sodium intake.

The Environmental Protection Agency’s own website says: “Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, increased respiratory symptoms.”

Which makes it deeply troubling that the very people at the helm of the Trump administration’s E.P.A. responsible for protecting public health and the environment are now pursuing a course that would make the air we breathe even more hazardous.
Last week, a recently reconstituted panel of science advisers to the E.P.A., the Clean Air Scientific Advisory Committee, sharply questioned the agency’s longstanding position that particulate pollution is causally linked with premature death, and it called for a new assessment of the pollutant. In a letter to the E.P.A. administrator, Andrew Wheeler, the committee’s chairman, Louis Anthony Cox Jr., said the agency had not provided “a sufficiently comprehensive, systematic assessment of the available science.” This is despite the fact that epidemiological studies from around the world have shown a robust association between real-world exposure to PM 2.5 and premature mortality.

The committee’s action is clearly a step toward weakening the standard for fine particulates and other air pollutants and would erode a central objective of the Clean Air Act, the 1970 law that is a pillar of the agency’s mission of protecting public health.

That law requires the E.P.A. to set standards, or limits, on certain so-called priority air pollutants at levels “requisite to protect public health” with “an adequate margin of safety” based on a review of the scientific knowledge about that pollutant. The agency does this by evaluating peer-reviewed scientific evidence and making a decision based on the weight of that evidence. Once the agency determines the standards, cities and counties must reduce their pollution to meet those limits.

Most of these particulates form through complex reactions with pollutants emitted from power plants, industries and motor vehicles. PM 2.5’s tiny particles are less than one-thirtieth the diameter of a human hair and are easily inhaled. On days when PM 2.5 levels spike, more people with heart and lung disease die than on cleaner days. Living in a place with chronically high levels of PM 2.5, as people do in Los Angeles, Pittsburgh and the San Joaquin Valley in California, for instance, increases one's risk of dying prematurely.
For years, anti-regulatory forces, including some members of Congress, have been trying to characterize epidemiology, the study of disease and health outcomes in populations, as “pseudoscience.” They have argued that epidemiological studies should not be used to set air quality standards because the health effects of air pollution are hopelessly confounded by other risk factors, like poverty, poor diet, smoking and diabetes. This view contradicts decades of public health and medical science accepted by the National Academies of Science and the Centers for Disease Control and Prevention, among others.

No matter.

The administration’s previous E.P.A. administrator, Scott Pruitt, last year broke with decades of standard practice when he appointed members of the Clean Air Scientific Advisory Committee, and his appointments included only one academic scientist and no epidemiologist. Mr. Wheeler further weakened the agency’s review process by disbanding a 20-member advisory panel for PM 2.5 that included highly qualified epidemiologists. (I served on that panel).

Dr. Cox, the current chairman of the clean air committee, runs a Denver-based applied research company. He has been pushing a narrow statistical approach that would exclude most epidemiological studies from consideration by the E.P.A. in reviews of clean air standards. Unfortunately, there is no longer an epidemiologist on the committee to challenge Dr. Cox’s view.

In a letter to Dr. Cox, I joined with 16 former members of the committee and the recently dismissed PM 2.5 review panel, some who served on both, to express our concern about the process and scientific substance of the PM 2.5 review now underway. In addition, over 200 air pollution and public health experts have urged the E.P.A. to reconvene the disbanded PM 2.5 review panel.
The Clean Air Scientific Advisory Committee is aggressively and irresponsibly challenging the abundant and well established evidence of the dangers of fine particulate matter. More than 23 million Americans live in areas where air pollution exceeds the PM 2.5 standards. If the E.P.A. revises air pollution standards that reject the weight of the evidence, the health of millions of Americans will be put at risk, and lives will be cut short.

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