

Negative health effects from burning coal and other fossil fuels

[Citizens Action Coalition Education Fund](#)

Scientists working for the U.S. Environmental Protection Agency (EPA) are able to predict how many premature deaths, heart attacks, and other impacts are caused by power plant pollution based on recent scientific studies by researchers affiliated with the American Cancer Society, the Harvard School of Public Health and other top universities and research institutions.

EPA consultants estimate that fine particle pollution from power plants shortens the lives of 887 Hoosiers each year. Hoosiers have the fifth highest risk of dying from power plant pollution in the country. "Fine particle pollution from power plants also causes 123,098 lost work days, 845 hospitalizations and 21,532 asthma attacks every year, 1,274 of which are so severe they require emergency room visits."

According to Stephen J. Jay, M.D., Chair of the Department of Public Health at Indiana University School of Medicine, "Indiana's power plants place it among the nation's top five polluting states in the country. . . . **In April, 2005, the EPA**

identified 17 counties in Indiana that failed to meet the 1997 air quality standards for health protection regarding fine particles These counties are home to more than 2.5 million Hoosiers – more than 40% of the state's total population."

The primary source of fine particle emissions comes from combustion of fossil fuels. "Because of their small size, fine particles can be inhaled deep into the lungs, and may enter the bloodstream. . . . There is broad scientific consensus that fine particle pollution endangers our health. These health effects range in severity from minor symptoms to chronic, serious and fatal outcomes."



Fine particle pollution:

- causes premature death in people with heart and lung disease, accounting for more deaths in the U.S. each year than either drunk driving or homicide (23,600);
- triggers thousands of heart attacks each year;
- worsens respiratory symptoms such as coughing, wheezing, and shortness of breath, triggering over 20,000 asthma attacks per year in Indiana;
- increases hospital admissions, emergency room visits and clinic visits for respiratory diseases and cardiovascular diseases;
- causes lung function changes, especially in children and people living with lung diseases such as asthma;
- causes changes in heart rate variability and irregular heartbeat;
- is associated with the development of chronic respiratory disease in children.

"Additionally, researchers have found that infants in areas with high levels of particulate matter pollution face a 26 percent increased risk of Sudden Infant Death Syndrome and a 40 percent increased risk of respiratory death." "A recent scientific study by researchers affiliated with the American Cancer Society found that people living in the most polluted cities have approximately a 12% increased risk of cardiopulmonary death over those living in the cleanest areas of the country. Similarly, for lung cancer, there is approximately a 16% increase risk for those living in the more polluted cities. Based on EPA data, each year, 114 lung cancer deaths and 1491 heart attacks in Indiana are attributable to power plant pollution."

According to the American Lung Association's "State of the Air: 2007" report, Indianapolis ranked 9th on the list of the most polluted cities across the nation.

"Children, the elderly, and people suffering from chronic illnesses are particularly vulnerable to the adverse health effects of air pollution. 'Poor and minority communities are also disproportionately affected by air pollution' because they often live closer to the emission sources. Well over 1 million children in Indiana live within 30 miles of a coal-fired power plant, the area associated with the highest health risks. Over 60,000 of these 1 million children have asthma."

As a result of fine particle pollution, the costs associated with premature mortality, illness, and lost productivity in Indiana exceed \$5 billion each year."

References:

Stephen J. Jay, MD, [The Public Health Impact of a Renewable Electricity Standard \(RES\) in Indiana](#), p. 3, testimony before the Indiana Regulatory Flexibility Committee, September, 2006.
Clear the Air, Indiana's Dirty Power Plants, available at <http://www.cleartheair.org/regional/in/>.

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