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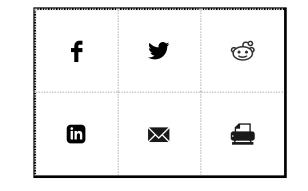
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How Coal Kills

Pollution from coal-fired power plants can be hazardous to the health of those living nearby.

By EarthTalk on February 17, 2015



Dear EarthTalk: I saw a chart that quantified the negative impacts on our health of our reliance on coal as an energy source. It was pretty shocking as I recall. Can you summarize what we're dealing with here? — Mitchell Baldwin, Boise, ID

Coal combustion plants account for more than half of Americans' electric power generation. According to Coal's Assault on Human Health, a report

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"The findings of this report are clear: While the U.S. relies heavily on coal for its energy needs, the consequences of that reliance for our health are grave," says Alan Lockwood, a principal author of the report and a professor of neurology at the University at Buffalo.

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The PSR report further illustrates the adverse effects of the mining of coal on the environment, water and human health. Coal mining leads U.S. industries in fatal injuries, and miners have suffered prolonged health issues, such as black lung disease, which causes permanent scarring of the lung tissues. Surface mining destroys forests and groundcover, leading to flooding and soil erosion. Mountaintop removal mining—used widely across southern Appalachia—can bury streams with rubble and, in turn, harm aquatic ecosystems. Waterways may also become contaminated due to the storage of post-combustion wastes from coal plants, also known as "coal ash." There are 584 coal ash storage sites in the United States, and toxic residues have migrated into water supplies at dozens of them.

"Coal ash is a silent killer," says Barbara Gottlieb, director of environment and health at PSR. "Communities are drinking contaminated water laced with toxic chemicals that poison humans."

According to the U.S. Department of Energy, coal plants can reduce sulfur oxide, nitrogen oxide and greenhouse-gas emissions by using biomass as a supplemental fuel in existing coal boilers. A Union of Concerned Scientists (UCS) report says that tree limbs and tops normally left behind after timber harvesting operations, and otherwise unmarketable materials like dead, damaged and small-diameter trees, can be collected for biomass energy use. Income from selling biomass can pay for or partially offset the cost of forest management treatments needed to remove invasive species or reduce the threat of fires.

Utilities like New Hampshire's Northern Wood Power are taking a lead in putting biomass energy to work in their power plants. In 2006, the company replaced a 50-megawatt coal-burning boiler in Portsmouth with one that uses wood chips and other wood materials for fuel. The result has been a reduction in coal use by more than 130,000 tons annually, reduced air emissions by more than 400,000 tons annually and the development of a thriving wood chip market for New Hampshire's forest industry.

Retrofitting coal-fired power plants to burn biomass makes sense for utilities trying to be greener while keeping their existing facilities productive, but environmental leaders stress that the federal government should provide more incentives for switching over to even greener energy sources like solar or wind.

CONTACTS: PSR, www.psr.org; UCS, www.ucsusa.org.

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