

Public Health Effects of Coal-Based Electricity

Kentuckians face the highest death rate in the U.S., largely due to cancer and heart disease - conditions scientifically linked to coal-based electricity. Coal is extracted in-state and burned to produce 92% of our electricity, meaning that Kentuckians face health risks from the entire coal life cycle. The public health cost of coal-based electricity - not reflected in our utility bills - is in the billions. And, what we lose from coal dependence is priceless.

“The truth about coal is that my baby girl is paying for coal with her childhood and her health and to me that’s not cheap at all.”

-Erica Urias, Pike County

health impacts of each step in the coal life cycle

EXTRACTION

Rates of premature death, chronic obstructive pulmonary disease (COPD), hypertension hospitalization, lung cancer, birth defects, congenital abnormalities and chronic heart, lung and kidney diseases increase as coal extraction increases, after adjusting for other factors. Water supplies, including wells, are contaminated with pollutants and heavy metals associated with cancer clusters. The frequency and magnitude of flooding, a public health threat, increases as a result of mining. Occupational health risks include black lung disease, silicosis, and death.

PROCESSING

Coal slurry, typically stored atop previous mine sites, is an imminent threat to Appalachian freshwater supplies. The volume and composition of stored slurry is unknown. Of known chemicals used, 19 cause cancer, 24 are linked to lung and/or heart damage and several are untested for health effects. Communities situated downstream from impoundments risk water borne exposure to slurry from spills, mudslides and flooding. 54 publicized slurry spills have occurred regionally, the largest of which was a 309 million gallon spill in Martin County, KY in 2000.

TRANSPORT

Air toxic and particulate matter levels and concentrations in communities along coal transport routes are increased due to fossil fuel combustion by coal trains and trucks. Coal truck dust samples tested in a community on a transport route contained unsafe levels of pollutants known to cause premature death, cancer, respiratory ailments and birth defects as well as brain, heart, nervous system and lung damage. Coal-related traffic accidents killed 53 people and injured 536 Kentuckians between 2000 and 2004.

BURNING

Breathing coal combustion pollution shortens the lives of 745 Kentuckians each year, the second highest risk in the country. Burning coal has led to unsafe levels of mercury, known to cause brain damage and birth defects, in every Kentucky waterway. Coal burning is also linked to lung cancer and heart disease - 2 of Kentucky’s leading causes of death. Increased rates of asthma, a condition which one in ten Kentuckians have, are attributable to burning coal. If sulfur dioxide and nitrous oxide emissions from Kentucky’s 22 coal-burning electricity plants were removed from the air, Kentuckians would save \$3 billion in public health dollars.

WASTE

Coal combustion waste (CCW) contains toxic chemicals and heavy metals known to cause cancer, birth defects, reproductive problems, learning disabilities in children, and damage to the nervous system and kidneys. Up to 1 in 50 residents living near one of Kentucky’s 44 CCW ponds is at risk of getting cancer from exposure to the waste. Other health effects linked to living near such ponds include higher risk of death and damage to vital organs and the central nervous system, especially in children. 7 of Kentucky’s ash ponds have been characterized as “high hazard,” meaning if a pond impoundment broke, it would likely cause significant damage or death.

We have a choice. Clean, healthy energy choices that bolster long-term economic security exist.



Prepared by Kentuckians For The Commonwealth
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