Electricity contribute to air toxics

How does electricity production contribute to increased levels of mercury and other air toxics and how can consumer electricity address it?

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The smokestacks of power plants spew a broad range of toxic substances into the air. Included among these chemical vapors are known carcinogens such as mercury, heavy metals (arsenic, beryllium, cadmium, nickel), dioxin, furans and PCBs. Based on a recent national inventory of hazardous air pollutants released into the air by electric power plants, EPA found that coal and oil fired generating units represent a major source of several major hazardous air pollutants. Other generating technologies – especially waste-to-energy facilities (municipal solid waste, tire burning and wood waste) also contribute to the nation's inventory of listed hazardous air pollutants. By contrast, natural gas plants and facilities relying on renewable energy sources have negligible or no toxic emissions, respectively.

Coal fueled electric power plants are the single largest source of mercury emissions. An inventory of mercury emissions conducted by EPA found that one-third of all mercury air emissions come from coal burning electric power plants. Mercury is present in the coal used as feedstock in the utility boiler. As the coal is combusted in the utility boiler, mercury is vaporized and released as a gas. Pollution controls employed by utilities to curb other pollutants are not effective in removing mercury. At present, there are no commercially viable control technologies for mercury. As a consequence, this highly toxic form of air pollution continues to go largely unabated.

Consumers can choose to buy their electricity from products certified as being comprised of renewable energy sources. Among the renewable resources, solar, wind and hydropower technologies emit zero air emissions. Biomass and geothermal fuels, as well as state-of-the-art natural gas facilities, may emit tiny amounts of air toxics. In contrast, coal, oil, and waste-to-energy

facilities emit significant amounts of toxic air pollutants. While pollution control technologies for these sources could become commercially available, the high costs likely preclude widespread use in a competitive power market. By choosing a power product that does not emit mercury or other air toxics, consumers can send a signal to electricity suppliers to not deploy existing power plants, or build new facilities, that generate these deadly emissions.

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