

Mercury Pollution in Montana

The dense and highly toxic metallic mineral mercury enters the air of the Treasure State from the mining of ore deposits, the burning of coal, and the incineration of waste.

According to the Environmental Protection Agency (EPA), coal-fired power plants are the largest source of mercury pollution in the country accounting for more than 40% of all emissions. Closer to home, coal-fired power plants reported that they were responsible for 92% of all mercury air emissions in Montana and according to EPA's toxic release inventory data for 2004, power plants emitted over 94,500 pounds of toxic mercury nationally and 1,010 pounds in Montana.

Mercury pollution has profoundly negative implications for public health and wildlife. Although technology currently exists to dramatically reign in power plant emissions by 90%, no plants in Montana are currently employing it. Montana needs stronger rules that require all plants to reduce mercury pollution as much as possible in the shortest possible time frame.

The amount of emissions from coal-fired power plants is expected to increase in the coming years due to an estimated 26% increase in coal consumption by 2020. In Montana alone, six new coal-fired power plants have been proposed (only 3 states have more proposals). These new power plants could more than double the total mercury emissions for the state.

Background

Airborne mercury emitted from coal-fired power plants returns to the earth with rain and snow, and ends up in water bodies where microorganisms convert it to methyl mercury.

Methylmercury, the most toxic form of mercury, is taken up by plant and

aquatic animal life, such as fish, where it bioaccumulates, meaning it increases in concentration as it moves up the food chain.

Consumption of contaminated fish is the most significant route of mercury exposure for humans, a particularly grave concern for Montana's blue-ribbon trout streams and vibrant fishing and guiding industry.

In 2004, the EPA issued a statewide fish consumption advisory applying to 100% of Montana's lakes and streams, warning Montanans about the health impacts of eating lake trout, pike, and walleye caught from our lakes and streams.

Mercury is an extremely potent neurotoxin, with serious health effects for those exposed - especially for women of childbearing age and young children. Children exposed in the womb are at greater risk for learning disabilities such as attention deficit disorder (ADD), mental retardation, blindness, cerebral palsy, and other birth defects.

Recent studies have shown a correlation between mercury exposure and heart disease in adult men as well as autism in children. In 2004, the EPA indicated that as many as one in six U.S. women has levels of mercury in her blood sufficiently high enough to pose a risk to a developing fetus.

The Clean Air Act requires the EPA to regulate toxic air emissions for chemicals like mercury. In 2000, the EPA announced that the agency would be regulating mercury emissions from coal-fired power plants in compliance with the Clean Air Act. At that time, EPA scientists reported that current technologies could achieve a 90% reduction in mercury emissions from power plants at a cost of less than 1% of industry revenues. Unfortunately the EPA has backpedaled, failing to adequately address the mercury

Resources

On the Web

Montana Environmental Information Center
PO Box 1184
Helena, MT 59624
(406) 443-2520
www.meic.org

Women's Voices for the Earth
114 W. Pine St
Missoula, MT 59801
(406) 543-3747
www.womenandenvironment.org

Government Agencies

Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-2544
www.deq.state.mt.us

Board of Environmental Review
1520 E. Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-2544
www.deq.state.mt.us/ber/

problem. Many states have taken action into their own hands. Illinois Gov. Rod Blagojevich (D) is pushing to reduce mercury emissions from coal plants by 90 percent over three years. Similar measures are being discussed in Georgia, Michigan, Minnesota, New Hampshire and Pennsylvania.

The 2005 Montana Legislature killed a bill in committee that would have put Montana ahead of the curve on controlling mercury emissions. HB 455 (Paul Clark, D-Trout Creek) would have required coal-fired or biomass power plants that have not already filed for an air quality permit to control 80% of their uncontrolled mercury emissions. Existing plants would have had until 2010 to reach this target.

During the 2007 Montana Legislature, several measures were introduced to address the harmful affects of mercury pollution, with varying degrees of success.

Representative Betsy Hands (D-Missoula) sponsored HJ 24, a resolution to urge the ban of exportation of elemental mercury. The United States is a net exporter of the neurotoxin mercury, and banning its use in the U.S. would have a noticeable effect on the availability of mercury worldwide, encouraging developing countries to switch to affordable mercury alternatives. HJ 24 encouraged Congress to enact legislation to prohibit the sale, distribution, transfer or exportation of elemental mercury and require the President to establish safe storage capacity for large quantities of elemental mercury. This bill had widespread support and was passed by the Legislature and signed into law by Gov. Schweitzer.

Rep. Sue Dickenson (D-Great Falls) sponsored House Bill 88, to regulate electrical generation facility waste. This bill would have given the Department of Environmental Quality the ability to regulate coal combustion waste from coal-fired power plants by considering coal combustion wastes a solid waste. Coal combustion waste is the fly ash, bottom ash or slurry left after coal is burned. These wastes contain approximately 5% hazardous substances, including arsenic, cadmium, chromium, lead - and mercury. This bill was never passed out of committee.

HB 586, sponsored by Rep. Jonathan Windy Boy (D-Box Elder) was geared to reduce toxic mercury emission limits for power plants in Montana. Coal-fired power plants account for 92% of the human-caused mercury emissions in the state and the technology exists to reduce mercury emissions while burning coal by 90%. This bill required the usage of these technologies. Unfortunately, this bill died in committee.

Representative Windy Boy also sponsored a House Resolution (HJ 37) that called for a study of the health effects of coal plants on Montana communities. His resolution, which did not proceed successfully in the Legislature, would have created an interim committee, in partnership with the Department of Environmental Quality and the Department of Public Health and Human Services, to study the health impacts of coal-fired power plants, especially on those living on Montana's reservations. The energy industry is

eager to develop the state's coal reserves and build plants near tribal lands. This bill had widespread support from conservation groups and tribal members.

Recommendations for the Future

In search of a Montana solution, 22 organizations and individuals petitioned the state Board of Environmental Review (BER) in September of 2005 to adopt a rule requiring coal-fired power plants to control 90% of their mercury emissions. The board members were receptive to the proposal, but did not act. Instead, the Board asked the Montana Department of Environmental Quality to present its version of a proposed rule at the BER February 2006 meeting.

DEQ's subsequent proposal was a decidedly mixed bag. On the plus side it ensured that Montana's coal-fired power plants would have to have a strong emissions reduction strategy in place by 2010. On the downside, the plan permitted a controversial and possibly illegal "cap and trade system" to allow coal-fired power plants to keep polluting at dangerously high levels until 2018.

However, in February 2008, a federal court took a significant step in protecting public health. It struck down a EPA regulation that delayed reductions in air emissions of mercury from coal-fired power plants until at least 2018. The court ruled that a "cap and trade" system could not be used for a hazardous air pollutant such as mercury.

The EPA, and states including Montana that have adopted weaker rules, must now rewrite their regulations to comply with the more stringent requirements of the Clean Air Act. In addition, states must re-analyze recently issued air pollution permits to determine whether the permits meet the requirements of federal law.

Though bills to dramatically decrease mercury pollution will likely see strenuous objections from Montana's electric utility industry, the next legislature will have an opportunity to support legislation requiring all of Montana's coal-fired power plants to control their mercury emissions by expeditiously installing the best technology available. Most electric utility industry lobbyists complained during the most recent legislatures that the technology was not yet available - even though in 2000, the EPA's own scientists said current technologies could achieve a 90% reduction of mercury from power plants, and some in the industry are now becoming believers in acquiring and employing such technology.

The Montana Environmental Information Center has helped led the way on this effort and recently reached a landmark emissions agreement with the 116 megawatt coal-fired Hardin Generating Station. The company agreed to install technology to control mercury emissions, making it the first power plant in Montana to do so. The 2009 Legislature is now in a strong position to pass legislation requiring all power plants to install this readily available technology.

For more information on the impacts of mercury - and solutions to this environmental and public health hazard, visit the Montana Environmental Information Center at: www.meic.org.