









September 20, 2021

Mr. Thomas Huebner

National Coal Program Review

Bureau of Land Management Wyoming State Office

5353 Yellowstone Rd

Cheyenne, WY 82009

Dear Mr. Heubner:

As national health, public health, medical and nursing organizations, we are writing to urge the Bureau of Land Management (BLM), in its review of the Federal Coal Leasing Program, to give top priority to a critical assessment of the program’s contribution to the climate crisis and impact on the health and well-being of the nation. Our organizations represent physicians, nurses, health and public health professionals and health workers, and hospitals and health care systems. We are committed advocates for urgent action to clean up air pollution, curb climate change and advance environmental justice. Making a rapid transition to clean renewable energy sources is important to our organizations’ shared mission, and to the health of our members and our constituents.

The Federal Coal Leasing Program conflicts with the nation’s climate policy and goals and threatens public health. Furthermore, this century-old program was created to address a need that no longer exists. The growing accessibility of new, cleaner energy sources, along with a concern for public health and the environment, have greatly reduced the nation’s dependence on coal. In order to protect public health, cut greenhouse gas emissions and accelerate the production of cleaner energy sources, the Bureau of Land Management must make structural reforms to the federal coal program.

**Impact of the Federal Coal Leasing Program on Climate Change**

Since its earliest days, the Biden administration has identified the critical need to reduce U.S. greenhouse gas emissions that cause climate change. As the fires, floods and heat waves of 2021 have clearly demonstrated, climate change, driven in large measure by burning fossil fuels, is causing a public health emergency. The emission of greenhouse gases is causing temperatures to rise year over year, fueling more extreme weather and contributing to dangerous hurricanes, heat waves, dramatic spikes in air pollution, and increases in tick- and mosquito-borne infectious disease outbreaks. These impacts are expected to increase in frequency, intensity and duration for years to come, and can be expected to have enormous consequences for the health and security of all Americans.[[1]](#endnote-2)

The extraction and combustion of coal produces three main types of greenhouse gases: carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4). Carbon dioxide and nitrous oxide emissions from coal are produced primarily during combustion for electricity generation. Methane gas is released both during mining and after mining as coal is degassed while in trans­port and processing. Even after a mine has stopped actively producing coal, it can continue to release methane.

The U.S government already measures these emissions on federal lands. In January 2016, the Secretary of the U.S. Department of the Interior tasked the U.S. Geological Survey (USGS) with producing a publicly available and annually updated database of estimated greenhouse gas emissions associated with the extraction and use of fossil fuels from federal lands. Using this data, the USGS in 2018 released a first-ever assessment of the greenhouse gas emissions resulting from fossil fuel extraction on federal lands in the report *Federal lands greenhouse gas emissions and sequestration in the United States -- Estimates for 2005–14*.[[2]](#endnote-3)

According to the USGS report, the combustion of coal extracted on federal lands in 2014 produced 734.8 million metric tons of carbon dioxide equivalent (MMT CO2 Eq.)[[3]](#footnote-2) of carbon dioxide, 2.2 MMT CO2 Eq. of methane and 3.7 MMT CO2 Eq. of nitrous oxide. Coal mining produced 11.8 MMT CO2 Eq. of methane, 10% of which was from abandoned mines.

The emissions associated with coal extraction on federal lands are a significant contributor to U.S. greenhouse gas production. This is unacceptable, especially as climate change intensifies and Americans suffer as a result of record-setting lethal heat waves, ravaging wildfires, and severe storms that cost lives and destroyed infrastructure. The Intergovernmental Panel on Climate Change warned that we face intensifying and irreversible climate effects if the world fails to reduce its greenhouse gas emissions, and the U.S. government will be called upon at the COP 26 conference to provide leadership in the fight against climate change.

**Impact of the Federal Coal Leasing Program on Human Health**

As the BLM conducts its new review of the Federal coal leasing program, it must bear in mind that the coal operations it permits can contribute in a variety of ways to negative impacts on human health. These impacts begin at the mines themselves. Inhalation of respirable coal dust causes coal workers’ pneumoconiosis, commonly referred to as CWP or black lung disease. CWP can result in lung impairment, disability, and premature death.[[4]](#endnote-4) Coal mine health impacts can also extend beyond the mine; for example, mining operations can contaminate nearby rivers, lakes, streams and aquifers with highly acidic water containing heavy metals like arsenic, copper, and lead.[[5]](#endnote-5)

Yet just as a meaningful assessment of the climate impact of BLM coal leases must take a comprehensive view, so an assessment of the health impacts of BLM coal leases must consider impacts beyond those at the point of extraction. These include the impacts associated with coal transportation, combustion, and waste disposal. While entire reports can be written on each of these steps, and indeed have, we offer here a brief summary of salient points:

**Coal transportation:** Coal is transported from the mine to its point of service via trains, trucks, and marine vessels. Each mode of transportation releases its own toxic air pollutants, primarily through diesel exhaust. These include particulate matter (PM) and oxides of nitrogen (NOx). NOx contributes to the production of ground-level ozone (smog). Coal trains also release respirable coal dust into the air, exposing communities far from the mine site to dangerous dust inhalation.

**Coal combustion:** When coal is burned, the health-endangering pollutants it releases, including nitrogen oxides (NOx) and sulfur oxides (SOx), affect all the major body organ systems. In fact, coal combustion contributes to four of the leading causes of mortality in the US: heart disease, cancer, stroke, and chronic lower respiratory diseases. Air pollutants caused by coal combustion, in particular the very small particulates known as PM2.5, adversely affect the respiratory system. PM2.5 is known to trigger asthma attacks; contributes to chronic obstructive pulmonary disease (COPD); and is correlated with mortality from lung cancer, the leading cancer killer in both men and women.

Pollutants produced by coal combustion also damage the cardiovascular system and the neurological system. Coronary heart disease is a leading cause of death in U.S., and coal combustion air pollutants, especially NOx and PM2.5, are known to negatively impact cardiovascular health. These impacts include cardiac arrhythmias, heart attacks, and congestive heart failure. Effects on the neurological system include stroke, associated with exposure to fine particles, and developmental delay, reduced IQ and permanent loss of intelligence, associated with mercury.

Neurological effects are in large measure propelled by coal combustion’s contributions to water pollution. Mercury exits power plant smokestacks as air pollution, then falls from the air in rain and other precipitation, contaminating rivers, streams, lakes and bays. There it enters the food chain, where it bioaccumulates in animal tissue. As larger animals eat smaller ones, mercury becomes more concentrated higher up the food chain. We humans eat at the top of the food chain, making consumption of mercury-contaminated fish the most common pathway of human mercury exposure. Most at risk are babies in utero. Children exposed to mercury during a mother’s pregnancy can experience persistent and lifelong IQ and motor function deficits. High levels of mercury exposure in adults have been associated with adverse cardiovascular effects, including increased risk of fatal heart attacks.[[6]](#endnote-6)

Families in many communities of color, including African-Americans and Native peoples, rely on fishing to supply basic nutritional needs.[[7]](#endnote-7) Fishing can provide an inexpensive and healthful food source, but when fish are contaminated, reliance on fishing for food poses increased health risks. Thus, subsistence fishing communities may face chronic exposure to high levels of mercury.[[8]](#endnote-8) Compounding this risk is the fact that communities of color and low-income communities frequently have limited access to health care, allowing adverse impacts to go unaddressed. In short, mercury contamination from oil- and coal-fired power plants is an environmental justice issue.

**Coal waste disposal:** After the carbon in coal is burned away, what remains is large quantities of waste material known as coal ash. Coal ash is one of the largest industrial waste streams in the U.S., after mining wastes.[[9]](#endnote-9) Typically, coal ash contains a host of naturally occurring toxic metals, including arsenic, lead, mercury, cadmium, chromium and selenium, as well as aluminum, antimony, barium, beryllium, boron, chlorine, cobalt, manganese, molybdenum, nickel, thallium, vanadium, and zinc.[[10]](#endnote-10) All can be toxic. Especially where there is prolonged exposure, these metals can cause several types of cancer, heart damage, lung disease, respiratory distress, kidney disease, reproductive problems, gastrointestinal illness, birth defects, impaired bone growth in children, nervous system impacts, cognitive deficits, developmental delays and behavioral problems. This toxic pollution can and does escape from coal ash disposal sites such as ponds and landfills.[[11]](#endnote-11)

**Recommendations**

Given the impact of coal on the world’s climate, and the urgent need to slow climate change by slashing greenhouse gas emissions; the range and severity of coal’s direct harms to health due to the pollutants released by combustion; and the number of people and population sectors vulnerable to these harms, we call on the Bureau of Land Management to take the following actions:

* Cease the extraction of coal on federal lands;
* Approve no new leases for coal extraction; and
* In place of coal, support, promote and facilitate the generation of clean, safe, carbon-free energy utilizing the resources so abundantly available on our federal lands: solar and wind energy.

We are heartened to see on the [BLM website](https://www.blm.gov/programs/energy-and-minerals/renewable-energy) a page devoted to expanding renewable energy production on federal lands, including the following:

*The BLM manages vast stretches of public lands that have the potential to make significant contributions to the nation’s renewable energy portfolio. For example, the BLM has identified portions of public lands that have excellent solar and wind energy potential, and significant geothermal energy resources. To promote the development of these energy sources, the BLM provides sites for environmentally sound development of renewable energy on public lands...The efficient deployment of renewable energy from our nation’s public lands is crucial in achieving the Biden Administration’s goal of a carbon pollution-free power sector by 2035.*

In so doing, the Bureau of Land Management will strengthen the declared intentions of President Joe Biden in his Executive Order 13990 of January 20, 2021 to:

*…listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.[[12]](#endnote-12)*

We the undersigned call on the Bureau of Land Management in the strongest terms possible to do its part to clean our air and water, protect our people, and help curb the potentially catastrophic ravages of climate change. End your coal leasing program and transition instead to the clean, safe, healthy renewable energy production this country needs.

Sincerely,

Alliance of Nurses for Healthy Environments

American Lung Association

American Public Health Association

American Psychological Association

American Thoracic Society

Greater Boston Physicians for Social Responsibility

Health Care Without Harm U.S.

International Society for Environmental Epidemiology -- North American Chapter

National Association of Pediatric Nurse Practitioners

Oregon Physicians for Social Responsibility

Physicians for Social Responsibility

Physicians for Social Responsibility, Arizona Chapter

Physicians for Social Responsibility, Maine Chapter

Physicians for Social Responsibility Pennsylvania

Texas Physicians for Social Responsibility

1. Watts N, Amann M, Arnell N et al. The 2020 report of The Lancet Countdown on health and climate change: responding to converging crises. Lancet 2020. [↑](#endnote-ref-2)
2. Merrill, M.D., Sleeter, B.M., Freeman, P.A., Liu, J., Warwick, P.D., and Reed, B.C., 2018, Federal lands greenhouse gas emissions and sequestration in the United States—Estimates for 2005–14: U.S. Geological Survey Scientific Investigations Report 2018–5131, 31 p., https://doi.org/10.3133/sir20185131 [↑](#endnote-ref-3)
3. The conversion of emissions to CO2 equivalents enables direct comparison of the different gases. To make the conversion, the amounts of gases are multiplied by their global warming potential, a factor that accounts for the effect a specific gas has in warming the atmosphere relative to the effect of CO2. [↑](#footnote-ref-2)
4. Centers for Disease Control and Prevention. The National Institute for Occupational Safety and Health (NIOSH). Pneumoconioses. <https://www.cdc.gov/niosh/topics/pneumoconioses/default.html> [↑](#endnote-ref-4)
5. Union of Concerned Scientists. Coal and Water Pollution. 2017. <https://www.ucsusa.org/resources/coal-and-water-pollution> [↑](#endnote-ref-5)
6. “Mercury Matters 2021: A Science Brief for Journalists” September 9, 2021. Harvard Chan C-CHANGE. https://www.hsph.harvard.edu/c-change/news/mercury-matters-2021-a-science-brief-for-journalists/ [↑](#endnote-ref-6)
7. National Environmental Justice Advisory Council. Fish Consumption and Environmental Justice. 2002. <https://www.epa.gov/sites/default/files/2015-02/documents/fish-consump-report_1102.pdf> [↑](#endnote-ref-7)
8. World Health Organization. Mercury and health. <https://www.who.int/news-room/fact-sheets/detail/mercury-and-health> [↑](#endnote-ref-8)
9. U.S. EPA. Frequent Questions about the 2015 Coal Ash Disposal Rule. https://www.epa.gov/coalash/frequent-questions-about-2015-coal-ash-disposal-rule#2 [↑](#endnote-ref-9)
10. U.S. Environmental Protection Agency. “Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities.” [EPA-HQ-RCRA-2009-0640; FRL-9149-4] [↑](#endnote-ref-10)
11. U.S. Environmental Protection Agency. “Summary of Proven Cases with Damages to Groundwater and to Surface Water,” Appendix, “Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities.” Proposed rule. http://www.epa.gov/osw/nonhaz/industrial/special/fossil/ccr-rule/fr-corrections.pdf. [↑](#endnote-ref-11)
12. Federal Register. Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis. <https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis> [↑](#endnote-ref-12)