



April 11, 2022

The Honorable Michael Regan, Administrator
 U.S. Environmental Protection Agency
 William J. Clinton Building
 1200 Pennsylvania Avenue, NW
 Washington, DC 20460

Sent via Regulations.gov

Re: Comments on National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Revocation of the 2020 Reconsideration, and Affirmation of the Appropriate and Necessary Supplemental Finding; Notice of Proposed Rulemaking, Docket ID No. EPA-HQ-OAR-2018-0794

Dear Administrator Regan:

The undersigned public health, health care and medical organizations strongly support EPA’s proposal to restore the finding that the Mercury and Air Toxics Standards (MATS) are “appropriate and necessary.” The standards are one of the most important public health protections put in place by EPA to reduce emissions of hazardous air pollutants (HAPs) in the communities we serve. We urge EPA to quickly finalize this proposal, examine the Residual Risk and Technology Review and then strengthen the standards to fully protect public health from dangerous emissions from coal and oil-fired power plants.

Mercury and hazardous air pollutants from power plants cause wide-ranging health harms.

Our organizations represent patients and healthcare, public health and medical professionals who treat patients and work in communities impacted by lung, cardiovascular and neurological impairments, and we are therefore keenly aware of the harmful health effects of air pollution. Research has shown that toxic pollution emitted by power plants is especially dangerous because of the harm it can cause to the respiratory, cardiovascular, nervous, endocrine, and other essential life systems within humans.

During the process of burning coal and oil, power plants emit highly toxic chemicals that threaten human health through the air we breathe, the water we drink, and the food we eat. These hazardous air pollutants that harm human health include corrosive substances (acid

gases, such as hydrogen chloride and hydrogen fluoride); carcinogens (formaldehyde, benzene, toluene, and other compounds); organic carbon-based toxics (formaldehyde, dioxins, furans); metals (such as arsenic, nickel, and beryllium); neurotoxins (such as mercury and lead); polycyclic aromatic hydrocarbons (PAHs); and radioactive materials (such as radium and uranium) (EPA, 2007; ATSDR, 2019).

Before the MATS rule was in place, EPA's own inventory of toxic emissions tallied the dangerous load of HAPs from coal-fired power plants. In the 2007 inventory, more than 440 electric generating units in 46 states emitted more than 386,000 tons of 84 separate hazardous air pollutants (EPA, 2007). These plants produced 40 percent of all hazardous air pollutants released from industrial sources into the atmosphere, more than any other industrial pollution source. The combustion of coal to generate electricity also produced 76 percent of the total volume of acid gases, 60 percent of arsenic, and 46 percent of mercury released into the atmosphere (EPA 2007).

Millions of people nationwide, including our patients and our communities, face special risk from the pollutants that are reduced by the MATS. Their age, health conditions, or rate of exposure to these pollutants make them more vulnerable. They include infants, children and teenagers; older adults; pregnant people; people with asthma and other lung diseases; people with cardiovascular diseases; diabetics; people of color; people with low incomes; and people who work or exercise outdoors. The discussion below highlights special concerns for several of these groups.

Children are more vulnerable to the adverse health effects of air pollution than adults. Children grow eighty percent of their lungs between birth and adolescence. The early postnatal period is when these delicate, growing tissues are at greatest risk. Children also breathe more rapidly, and tend to spend more time outdoors than adults, which exposes them to more pollutants (American Academy of Pediatrics, 2021).

Even before birth, children face increased risk. As noted earlier, fetuses, infants, and children face impaired neurological development and cognitive abilities, memory, and language skills because of the toxic effects of methylmercury exposure. Dioxins and furans threaten the developing systems, including the nervous system, and these toxics and others may increase the risk of cancer in children. Furthermore, estimates for children may understate the risks from toxics because of limited monitoring, limited information on toxicity and use of models that do not consider the potential for increased risk for children (American Academy of Pediatrics, 2021).

People with chronic diseases, including cardiovascular diseases, respiratory diseases and diabetes, face higher risk regardless of age. Current estimates include millions of people in these groups:

- Asthma – 24.8 million people, including 5.5 million under age 18
- Coronary Heart Disease – 15.8 million people
- Diabetes – 25.2 million people
- Chronic Obstructive Pulmonary Disease (COPD)—16 million adults age 18 and older

--(CDC, 2018a; CDC, 2018b)

As adults age, their physiological processes decline naturally, placing even healthy older adults at risk from airborne pollutants. In addition, many older adults also have one or more chronic diseases that increase their susceptibility (EPA, 2009).

People who have low incomes or are members of racial or ethnic minorities bear a disproportionate burden of the health effects of air pollution. A 2022 study found that neighborhoods in which the federal government discouraged investment nearly 100 years ago – via a racist practice known as redlining – face higher levels of air pollution today, including nitrogen dioxide and fine particulate matter pollution (Lane et al., 2022). Another 2022 study found disparities in trends in PM2.5 levels between American Indian and non-American-Indian-populated counties, with levels increasing in the former relative to the latter between 2000 and 2018 (Li et al., 2022).

Because they are more likely to live closer to industrial facilities and high traffic areas, low-income and minority populations are at much higher risk of exposure to the most harmful pollutants (O’Neill et al., 2003). One study found that 68 percent of African Americans lived within 30 miles of a coal-fired power plant (Georgia Coalition for the Peoples’ Agenda et al., 2002). Another study of five power plants in the Washington, DC area found that African Americans and those with less than a high school education were among the groups hardest hit by pollution from the power plants. Almost half of the risks for premature death due to power plant pollution-related exposures were borne by the 25 percent of the population with less than a high school education (Levy et al., 2002).

Vulnerable people and communities deserve the protections the Clean Air Act requires EPA to provide.

EPA’s 2020 revocation of the “appropriate and necessary” finding was fundamentally flawed.

In 2016, in response to the Supreme Court decision in *Michigan v. EPA*, EPA assessed the costs and benefits of the standards in its Supplemental Findings. EPA estimated, based on the projections in its 2011 Regulatory Impact Analysis, that the annual costs of compliance with MATS would total approximately \$9.6 billion, while the annual benefits totaled between \$33 to \$90 billion (EPA, 2016). In its 2020 reconsideration proposal, EPA reversed the finding that the MATS were appropriate and necessary, arguing that only the direct benefits of reducing mercury and the other HAPS could be included in its assessment of the economic benefits of this rule.

Many of our organizations firmly opposed this refusal to recognize the benefits of the reductions in particulate matter in the assessment of the costs and benefits of the MATS rule. Despite the long-demonstrated reality of these impacts, the 2020 rulemaking failed to follow EPA’s own unambiguous guidance on assessing the costs and benefits of regulatory actions. The current EPA *Guidelines for Preparing Economic Analysis* specifically direct the agency to include the full range of benefits and costs, including ancillary co-benefits:

“An economic analysis of regulatory or policy options should present all identifiable costs and benefits that are incremental to the regulation or policy under consideration. **These**

should include directly intended effects and associated costs, as well as ancillary (or co-) benefits and costs [bold added].” (EPA, 2010)

The *Guidelines* also references the OMB’s Circular A-4 guidelines, in place since 2003, that logically and clearly direct federal agencies to account for those ancillary benefits or co-benefits.

“Your analysis should look beyond the direct benefits and direct costs of your rulemaking and consider any important ancillary benefits and countervailing risks. **An ancillary benefit is a favorable impact of the rule that is typically unrelated or secondary to the statutory purpose of the rulemaking [bold added].”** (OMB, 2003)

In its draft 2017 report to Congress on costs and benefits of federal regulations, the Office of Management and Budget recognizes that these benefits have long been included as part of these estimates:

“The consideration of co-benefits, including the co-benefits associated with reduction of particulate matter, is consistent with standard accounting practices and has long been required under OMB Circular A-4.” (OMB, 2017).

Our organizations support EPA’s “totality of the circumstances” methodology.

EPA’s preferred “totality-of-the-circumstances” approach looks at all the benefits of reducing hazardous air pollutants regardless of whether the benefits can be quantified or monetized. This “totality-of-the-circumstances” approach makes the most sense because it recognizes that many benefits of reducing toxic air pollution exposure can’t be quantified, but are no less real.

As EPA notes, the harms of hazardous air pollutants are often concentrated, and more studies would be needed to monetize benefits such as reduced lifetime cancer risk or avoided reproductive harm in specific communities. To argue that because these benefits can’t be quantified, they shouldn’t factor into whether a pollution control measure is appropriate and necessary runs counter to both the law and the Administration’s stated environmental justice commitments. If pollutants that impact specific communities are more difficult to quantify than widespread pollutants, making regulatory decisions based solely on what benefits are quantifiable risks denying clean air to the communities most in need of it, directly in conflict with the statutory requirement EPA cites to protect the “maximum exposed individual.”

Under either of EPA’s alternative approaches, however, the MATS are appropriate and necessary. This determination was correct in 2016 and the record has only grown stronger.

EPA’s 2022 proposal indicates that pollution reductions have been even greater than forecasted by EPA in 2012. EPA now shows that mercury emissions are down 86% compared to 2010, far greater than the 75% reduction expected. It also found that acid gas hazardous air pollutants have been cut by 96%, and non-mercury metal hazardous air pollutants have been reduced by 81%.

The 2022 EPA proposal shows that there are significant benefits from cleaning up power plants, including some new ones since their last analysis. EPA’s original analysis predicted that the benefits of reducing mercury alone would total in the millions of dollars every year. Harvard University found that the real benefits may total in the *billions* of dollars every year (Sunderland et al., 2021).

Research on mercury has expanded beyond the impact to the central nervous system to its cardiovascular effects. A review of more than 90 studies identified multiple ways that mercury affects the cardiovascular system and found strong correlations with extensive cardiovascular risks, including high blood pressure, coronary heart disease, and heart attacks (Genchi et al., 2017). Another study looked at these cardiovascular impacts to assess the economic benefits of mercury controls from MATS and estimated \$43 billion in benefits in 2050 (Giang and Selin, 2016).

Finally, in 2012, EPA estimated it would cost \$9.6 billion per year to implement the rule. In reality, the cost has been far lower. EPA now indicates that it overestimated the annual compliance costs by as much as \$4.4 billion. EPA's 2022 proposal highlights two studies that indicate that the estimate for the 2012 rule may have overestimated annual compliance costs by as much as \$7 billion.

MATS should be strengthened to further protect the most vulnerable from these pollutants

Despite the progress made to clean them up, power plants are still the nation's largest emitter of mercury and many other hazardous air pollutants. EPA needs to strengthen power plant standards to further protect individuals from dangerous pollution.

In February, EPA released the 2021 data on power plant emissions, showing power plant pollution increased in 2021 compared to the previous year. Specifically, the EPA report showed large increases in all the pollutants tracked, including a 20% increase in sulfur dioxide emissions, which likely means that toxic acid gases increased last year. In this report EPA also showed a 13% increase in mercury emissions. The thirteen percent increase in mercury last year is a nationwide number, but the specific increases at individual power plants are staggering. For example, the Bull Run power plant in Tennessee shows a 299% increase in total mercury emissions and 202% increase in the rate of mercury emissions per unit of power generated. The Comanche plant in Colorado had a 227% increase in mercury emissions, placing it into the top 10 largest mercury polluters in 2021, up from 65th in 2020. There are many more examples of emission increases at power plants in three dozen states (EPA, 2022). And we know that the burden of this spike in toxic pollution isn't shared evenly; certain communities bear a disproportionate health burden from toxic pollution from power plants.

In the 2022 proposal, EPA notes that power plants are the largest source of hydrogen chloride, hydrogen fluoride and selenium emissions, and are a major source of metallic hazardous air pollutant emissions including arsenic, chromium, nickel, and cobalt. Arsenic, chromium, and nickel are human carcinogens.

EPA also says in the proposal that exposure to these hazardous air pollutants is associated with a variety of adverse health effects including chronic health disorders (e.g., irritation of the lung, skin, and mucus membranes; decreased pulmonary function, pneumonia, or lung damage; detrimental effects on the central nervous system; damage to the kidneys; and alimentary effects such as nausea and vomiting).

The proposal also says that EPA has classified four of the hazardous air pollutants emitted by power plants as carcinogens, and five as probable human carcinogens. Power plants are also a source of cadmium, selenium, and lead, which are classified as probable human carcinogens.

Further, we support the proposal's focus on the statutory requirement to protect the "maximum exposed individual" – not the average individual or a healthy adult. This focus on the person most exposed to HAPs from these sources is crucial to fulfill EPA's mission of protecting human health and the environment, and of the Administration's stated focus on furthering environmental justice.

EPA needs to reconsider the previous administration's "do-nothing" technology review and promote additional pollution reductions. We urge EPA to complete the residual risk and technology review or RTR promptly. As EPA noted in the proposed rule, the President, in his executive order called for the RTR rule to be proposed by August 2021. The recent year over year increases show that there is no time to delay the cleanup of toxic pollution.

Conclusion

For more than 20 years, electric utilities avoided requirements to clean up toxic pollutants as set in the Clean Air Act Amendments of 1990. Thanks to the MATS, which were the first-ever federal limits on air toxics from power plants, their facilities now emit 86% less mercury, 96% less acid gas hazardous air pollutants, and 81% less non-mercury metal hazardous air pollutants. Putting in place these safeguards against toxic air pollution from electric utilities, as required under the Clean Air Act, has provided long-needed protection to our patients and communities from life-threatening pollution. These measures have prevented tens of thousands of cases of illness and even premature death, clear evidence that they are both "appropriate and necessary."

Our organizations support EPA restoring the finding that Mercury and Air Toxics Standards are appropriate and necessary. Now the agency needs to fully clean up mercury and other toxic air pollution from power plants. We ask EPA to set even stronger limits to fully protect all people nationwide, regardless of where they live.

Sincerely,

Allergy & Asthma Network
Alliance of Nurses for Healthy Environments
American Academy of Pediatrics
American Heart Association
American Lung Association
American Psychological Association
American Public Health Association
American Thoracic Society
Asthma and Allergy Foundation of America
Children's Environmental Health Network
Health Care Without Harm
Medical Society Consortium on Climate and Health¹
National Association of Pediatric Nurse Practitioners

¹ The views of the Consortium do not necessarily represent the views of each individual member society.

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