



June 23, 2023

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 Review of the Residual Risk and Technology Review, Docket ID No. EPA-HQ-OAR-2018-0794

Dear Administrator Regan:

The undersigned health and medical organizations thank the Agency for the opportunity to comment on National Emissions Standards for Hazardous Air Pollutants from coal- and oil-fired electric generating units, also known as the Mercury and Air Toxics Standards (MATS). The health community has a long history of engaging the Agency on these regulations and is once again urging EPA to finalize the strongest, most health-protective limits on emissions of mercury and other hazardous air pollutants from power plants.

This action is particularly welcome after months of delay in EPA’s action earlier this year on restoring the appropriate and necessary finding for the MATS. The protection of vulnerable populations – particularly babies and children – from toxic air pollution is appropriate and necessary and we appreciate that the Agency quickly moved to propose strengthening of the MATS.

The MATS have a proven record of success.

Since the MATS took effect in 2012, they have led to marked reductions in hazardous air pollution. According to the 2008 National Emissions Inventory, coal- and oil-fired electric generating units (EGUs) emitted a combined 58,705 pounds of mercury emissions (with coal-fired EGUs making up the vast majority of emissions). In 2017, after

the MATS were fully implemented, emissions plummeted down to 9,136 pounds. Emissions of PM_{2.5} – which is also released from coal- and oil-fired EGUs or formed from other EGU emissions – also saw a decrease after the implementation of the MATS, dropping from over 286,000 tons in 2008 to 78,421 in 2017.¹

In response to the Supreme Court decision in *Michigan v. EPA*, EPA issued supplemental findings assessing costs and benefits of the standards. EPA estimated that the total compliance costs for the MATS would be around \$9.6 billion while the annual benefits totaled between \$33 and \$90 billion.²

Our groups strongly supported efforts to reinstate the finding that it is “appropriate and necessary” under the Clean Air Act to regulate emissions of hazardous air pollutants from coal- and oil- fired power plants after the finding was reversed in 2020. According to EPA’s factsheet accompanying this proposal, acid gas hazardous air pollutants have been reduced by over 96% since 2010 while non-mercury metals – which include known carcinogens – have been reduced by more than 81%.

Despite this progress, in 2021 mercury emissions increased by 13%.³ While we’re glad to see that emissions decreased then by 3% in 2022, mercury levels are still higher compared to 2020. We also know that there are some individual plants that have had enormous increases in mercury emissions in 2022 compared to 2021.⁴ EPA has an opportunity to help reverse this upward trend by finalizing more stringent, health protective MATS this year.

The undersigned health groups highlight three opportunities for EPA to finalize a stronger MATS rule.

The proposal does present modest improvements in reducing the levels of mercury and other pollutants from power plants and asks for comment on some more stringent levels that could provide even more health benefits. The asks from our groups can be summarized as:

- Strengthen the filterable PM (fPM) standard to no higher than 0.006 pounds per million British thermal units (lb/MMBtu) of heat.
- Require stringent emission standards for lignite-fired electric generating units (EGUs).

¹ U.S. Environmental Protection Agency (EPA). 2017. National Emissions Inventory. Available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#doc>

² U.S. Environmental Protection Agency (EPA). 2016. 40 CFR Part 63. Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units; Final Rule. 81 Federal Register 24420.

³ U.S. Environmental Protection Agency (EPA). 2021. Power Sector Programs Progress Report. Available at https://www3.epa.gov/airmarkets/progress/reports/pdfs/2021_full_report.pdf

⁴ U.S. Environmental Protection Agency (EPA). 2022. Power Plant Emission Trends. Available at <https://www.epa.gov/airmarkets/power-plant-emission-trends>

- Require all coal-fired EGUs to demonstrate compliance with the standards by using continuous emissions monitoring.

Hazardous air pollutants emitted from power plants can dramatically harm health.

Throughout the process of burning coal and oil, a long list of dangerous chemicals and pollutants are released. The hazardous air pollutants released can include acid gases such as hydrogen chloride and hydrogen fluoride; carcinogens such as formaldehyde and benzene; carbon-based toxins like dioxins; metals like arsenic and beryllium; neurotoxins (mercury and lead); and radioactive materials such as radium and uranium.⁵

All of these toxics pose serious threats to health. Some of these pollutants such as acid gases, mercury and sulfur dioxide have immediate impacts on the communities located near power plants but other pollutants – like dioxins and metals – are transported long distances and can impact communities much further from the source. When they adhere to fine particles, these pollutants can remain in the air for more than a week and be carried to further locations.

Mercury is emitted in three forms from a power plant. It is emitted as an elemental gas, as an oxidized form, and also bound to particles. The release of elemental mercury as a vaporous gas causes the toxin to have widespread distribution. Mercury can pollute waterways leading to its conversion into methylmercury, a highly toxic form of mercury that bioaccumulates in fish and shellfish, contaminating food sources.

Eating foods containing methylmercury exposes the brain – including that of a developing fetus – to health harms. Mercury exposure can lead to developmental birth defects and interfere with neurological development. It can also damage the kidneys, liver, brain and nervous system of both children and adults.

Health organizations submitted a letter to EPA in 2011 during the comment period for the proposal of the original MATS that details the numerous well-documented health harms from the long list of hazardous air pollutants released from power plants.⁶ With a long list of health harms, there is also the opportunity for immense health benefits. According to EPA's Regulatory Impact Analysis, the annual value net health benefits between 2028 and 2037 is projected to be \$170-220 million. If the more stringent standards that EPA is requesting comment on are finalized, those health benefits would be estimated at \$1-\$1.3 billion.⁷

⁵ Agency for Toxic Substances and Disease Registry (ATSDR). 2010. Medical Management Guidelines for Hydrogen Chloride (HCl). Updated September 1, 2010. Accessed February 27, 2011. <http://www.atsdr.cdc.gov/MHMI/mmg173.pdf>

⁶ Comments from National Health Organization to EPA on Mercury and Air Toxics Standard. Aug 4, 2011. <https://www.lung.org/getmedia/c728e6b6-1839-404c-908a-ed68ac7ff988/Comments-on-EPA-Proposed-Mercury-Air-Toxics-Rule-August-4-2011.pdf>

⁷ Regulatory Impact Analysis for the Proposed National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review (April 2023) U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-23-002, 2023

The exposures of air pollution are also not equally distributed. While EPA estimates that “meaningful EJ exposure concerns are not likely created or exacerbated by the rule”, the reality remains that people of color or people with lower socioeconomic status bear the brunt of air pollution exposure. EPA notes that the percentage of Native Americans living within 10 kilometers of a unit emitting greater than 25 megawatts is above the national average. There is also a higher percentage of people living below two times the poverty level than the national average that reside within 10 kilometers from such units.⁸

EPA should strengthen the standards on filterable PM to at least 0.006 pounds per British thermal units of heat to create more meaningful reductions of non-mercury metals.

The MATS have helped to drive pollution cleanup over the past decade. Combined with other air pollution regulations, the levels of fPM are lower than they were before the implementation of the MATS. Because of this, while the proposal does strengthen the fPM standard from 0.030 down to 0.010 lb/MMBtu, EPA estimates that 91% of coal-fired power plants are already meeting the standard, meaning that the actual health benefits from this strengthening would likely be minimal.

While fPM is not classified as a hazardous air pollutant under the Clean Air Act, non-mercury metals and other elements like arsenic and selenium comprise a significant part of fine particulate matter (PM_{2.5}). These primary particles, along with the secondary particles that are formed as a result of chemical reactions of sulfur dioxide and nitrogen oxide emissions, carry life-threatening risks.

PM_{2.5} particles are smaller than the diameter of a human hair, making them small enough to lodge deep within the respiratory tract when they are inhaled. Exposure to PM_{2.5} can lead to respiratory harm, including asthma exacerbations, inflammation of the upper and lower airways, and even respiratory mortality. PM_{2.5} also causes cardiovascular harm including myocardial infarction, congestive heart failure, cardiac arrhythmias, and strokes. EPA has also determined that exposure to PM_{2.5} is likely to cause cancer.⁹

EPA estimates that the number of particulate matter premature deaths avoided with the baseline proposal would be 11 in 2028. If EPA finalized the more stringent proposal, the total premature deaths avoided from particulate matter would be 240 in 2028. Additionally, the number of cases of avoided adult morbidities from PM_{2.5} exposures such as hospital and emergency department admissions for cardiovascular and

⁸ Regulatory Impact Analysis for the Proposed National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review (April 2023) U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-23-002, 2023

⁹ U.S. EPA. Supplement to the 2019 Integrated Science Assessment for Particulate Matter (Final Report, 2022). U.S. Environmental Protection Agency, Washington, DC, EPA/635/R-22/028, 2022.

respiratory illnesses, stroke, lung cancer, and asthma are all reduced by approximately 19 times more than the proposed standard in 2028.¹⁰

We urge EPA to finalize the 0.006 lb/MMBtu alternative to better protect health from fine particulate matter and note that an even stronger level could yield more health benefits.

Requiring stringent standards for lignite-fired electric generating units is a long overdue update.

Compared to other types of hard coals like anthracite or bituminous coal, lignite is the lowest quality coal, creating more smoke and containing the greatest number of compounds other than carbon – like sulfur and mercury. Currently, lignite-fired EGUs are subject to a mercury emission standard of 4.0 lb/TBtu while other forms of coal (like bituminous and subbituminous) are capped at 1.2 lb/TBtu.

While hazardous air pollutants have been dramatically reduced since the adoption of the MATS in 2012, coal-fired EGUs still emit a substantial amount of pollution. EPA estimated in 2021 that mercury emissions from coal-fired EGUs decreased 90% compared to 2010, before the MATS.¹¹ But units burning lignite coal make up 16 of the 20 top mercury emitters (almost 30% of all coal-fired EGUs in 2021) despite not contributing substantially to the total energy produced.¹²

EPA notes in the proposal that information collected on current mercury emissions levels and control technologies showed an opportunity for lignite-fired EGUs to achieve mercury emissions rates that are much lower than the current standard. The technology that EPA identified as the most cost-effective for mercury emissions control in 2012 is currently being used by very few lignite-fired EGUs, despite its ability to reduce mercury emissions by greater than 90%.¹³ We strongly support EPA requiring that lignite-fired EGUs – which are more polluting than other types of coal-plants – meet the same level of emissions standards that are required of non-lignite EGUs.

Requiring continuous emissions monitoring to demonstrate compliance with the standard will ensure communities located near power plants are protected from dangerous daily spikes in pollution.

Currently, many EGUs can opt to either conduct quarterly performance testing or use continuous emissions monitoring systems. EPA estimates that approximately two thirds

¹⁰ Regulatory Impact Analysis for the Proposed National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review (April 2023) U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-23-002, 2023

¹¹ 2021 Power Sector Programs Progress Report; available at https://www3.epa.gov/airmarkets/progress/reports/pdfs/2021_full_report.pdf and in the rulemaking docket.

¹² Federal Register 04/24/2023 National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review. 88 FR 24854

¹³ Federal Register 04/24/2023 National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review. 88 FR 24854

of all existing coal-fired generating units do not utilize continuous emissions monitoring despite the technology being more cost-effective than quarterly testing.¹⁴ Continuously monitoring emissions provides real-time data that can help improve emissions controls and identify non-compliance more effectively, therefore limiting the amount of fPM that is released without remedy or ramifications. Our groups strongly support EPA requiring the use of continuous emissions monitoring for fPM as it is essential to protecting public health, especially in communities located on the fence line of power plants.

EPA must finalize the most stringent standards by the end of 2023.

Given the inordinately long delay to reinstate the appropriate and necessary finding for the MATS, EPA must finalize this proposal with the most stringent provisions that afford more public health protection, no later than the end of 2023. Any delay in implementing stronger limits on mercury and other hazardous air pollution means accruing risks of health harms to babies and fetuses that could follow them into adulthood.

We thank EPA for the opportunity to comment on this proposal and urge the finalization of the more stringent emission standard for non-mercury metals to at least 0.006 lb/MMBtu, uphold the 1.2 lb/TBtu standard for lignite-fired EGUs, as well as the requirement for continuous emissions monitoring and to finalize the rule by the end of 2023.

Sincerely,

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

¹⁴ Federal Register 04/24/2023 National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review. 88 FR 24854