NACAA
national association of clean air agencies

April 10, 2019

U.S. Environmental Protection Agency
EPA Docket Center
Docket ID No. EPA-HQ-OAR-2018-0794
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Sir/Madam:

On behalf of the National Association of Clean Air Agencies (NACAA), thank you for this opportunity to comment on the proposed National Emissions Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units – Reconsideration of Supplemental Finding and Residual Risk and Technology Review, which were published in the *Federal Register* on February 7, 2019 (84 *Federal Register* 2670). NACAA is the national, non-partisan, non-profit association of air pollution control agencies in 41 states, including 114 local air agencies, the District of Columbia and four territories. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the United States. These comments are based upon that experience. The views expressed in these comments do not represent the positions of every state and local air pollution control agency in the country.

The standard that is the subject of the proposal – also known as the Mercury and Air Toxics Standards (MATS) – was issued on February 16, 2012.[1] Since that time, nearly all sources have complied with the standard, resulting in significant reductions in emissions of mercury and other pollutants. Clearly, MATS has provided significant benefits to public health and should remain in place.

"APPROPRIATE AND NECESSARY" DETERMINATION

Consideration of Co-Benefits in the Cost-Benefit Analysis

Section 112(n)(1)(A) of the Clean Air Act (CAA) states, "The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph." EPA determined in 2000 and 2011 that such a regulation is appropriate and necessary and established MATS. In 2016 the agency reaffirmed its appropriate and necessary determination.

[1] https://www.federalregister.gov/documents/2012/02/16/2012-806/national-emission-standards-for-hazardous-air-pollutants-from-coal--and-oil-fired-electric-utility.

In the February 7, 2019 *Federal Register* notice, EPA proposes to reverse its previous determinations and find that it is not "appropriate and necessary" to regulate emissions of hazardous air pollutants (HAPs) from coal- and oil-fired electricity generating units (EGUs), primarily due to its proposed treatment of co-benefits. NACAA opposes both the elimination or diminishment of the consideration of co-benefits in EPA's cost-benefit analysis of MATS[2] and the agency's proposal to reverse the appropriate and necessary finding related to the control of HAPs from EGUs.

In the proposal, EPA states that the 2016 appropriate and necessary determination, made in response to a U.S. Supreme Court ruling in *Michigan v. EPA,*[3] is flawed. EPA takes issue with the two approaches the agency used in its 2016 appropriate and necessary finding and concludes that neither method for considering cost satisfies the agency's obligation as interpreted by the Supreme Court in *Michigan v. EPA*.

As part of the 2016 determination, EPA identified an approach in which it considered the formal cost-benefit analysis, which accounted for the monetized and non-monetized benefits of MATS, including HAP-related benefits that could not be quantified or monetized, as well as the monetized co-benefits of reducing pollutants other than HAPs. The benefits exceeded the costs of compliance by three to nine times. EPA concluded at the time that the cost-benefit analysis supported the appropriate and necessary finding.

In the new proposal, EPA states that this approach is flawed because it relied equally on the particulate matter (PM) air quality co-benefits projected to occur from the reductions in HAPs. Instead, the agency now articulates a different consideration of cost in which it directly compares the cost of compliance with MATS with the benefits specifically associated with reducing emissions of *only* HAPs. This new approach results in EPA proposing to "conclude that it is not appropriate and necessary to regulate HAP from EGUs under CAA section 112 because the costs of such regulation grossly outweigh the HAP benefits."[4]

As stated above, EPA should not eliminate or diminish the consideration of co-benefits in its cost-benefit analysis of the regulation, nor should it reverse the "appropriate and necessary" finding. Overlooking known benefits in cost-benefit analyses would deviate from basic accounting principles and would overemphasize program costs to regulated industries while profoundly understating public health benefits. EPA and its co-regulators at state and local air agencies have examined and relied on the co-benefits of air pollution regulations for decades. Excluding them from the MATS analysis would be a dramatic departure from past practice and would artificially ignore some of the very real public health and environmental benefits of MATS that are most readily quantifiable. Failing to consider these benefits would be counter to EPA's primary mission, which is to protect public health.

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[2] NACAA previously commented on the co-benefit topic in a response to an EPA advance notice of proposed rulemaking, entitled "*Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process*" (83 *Federal Register* 27524). The NACAA letter of August 8, 2018 is available at http://www.4cleanair.org/sites/default/files/Documents/NACAACBANPRMComments-Final.pdf.

[3] https://www.supremecourt.gov/opinions/14pdf/14-46_bqmc.pdf.

[4] https://www.govinfo.gov/content/pkg/FR-2019-02-07/pdf/2019-00936.pdf, p. 2676.

EPA's proposal to dismiss the co-benefits resulting from MATS is contrary to EPA's and the U.S. Office of Management and Budget's (OMB's) own procedures. For example, OMB Circular A-4 states:

> *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 (e.g., reduced refinery emissions due to more stringent fuel economy standards for light trucks)…."*[5]

Additionally, EPA's *Guidelines for Preparing Economic Analyses* states: "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."[6]

It should be noted that under the current standard, PM is a surrogate for non-mercury metals. Reducing PM also reduces HAPs directly.

Supreme Court Decision

EPA suggests several times that its new proposal is informed by the Supreme Court's June 29, 2015 opinion in *Michigan v. EPA* striking down MATS. It is important to clarify that the Supreme Court's ruling does not prohibit the consideration of co-benefits. It does not instruct EPA on how it should consider costs at all. Indeed, the Court took clear steps to remain silent on the issue. EPA cannot correctly infer or imply that the Court does not want co-benefits to be considered.

Michigan v. EPA referenced the question of whether to count co-benefits only within the narrow context of rejecting an argument from EPA that MATS should be upheld because the agency's final cost-benefit analysis – which relied substantially on co-benefits – showed more benefits than costs. To reach that conclusion, the Court cited the general administrative law principle that agencies can only defend their actions with the justifications they used to develop them. In other words, they cannot retroactively create new rationales when they are taken to court. The Court rejected EPA's co-benefits-driven regulatory impact analysis as a basis for MATS not because the agency cannot consider co-benefits but because EPA did not make a co-benefits argument when it decided to regulate power plants under Section 112. The text of the opinion makes clear that the issue of including or excluding co-benefits was entirely irrelevant to the case and was not addressed by the Court:

> *Some of the respondents supporting EPA ask us to uphold EPA's action because the accompanying regulatory impact analysis shows that, once the rule's*

[5] OMB Circular A-4, September 17, 2003 available at https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf, p. 26.

[6] *Guidelines for Preparing Economic Analyses,* December 17, 2010 (updated May 2014), p. 11-2 (p. 208 of PDF), available at https://www.epa.gov/sites/production/files/2017-08/documents/ee-0568-50.pdf.

> *ancillary benefits are considered, benefits plainly outweigh costs. […] As we have just explained, however, we may uphold agency action only upon the grounds on which the agency acted. Even if the Agency could have considered ancillary benefits when deciding whether regulation is appropriate and necessary—a point we need not address—it plainly did not do so here.*[7] (Underline added.)

Clearly, the Supreme Court did not provide instructions to EPA nor make a determination on the use or dismissal of co-benefits in cost-benefit analyses.

Deficiencies in the Regulatory Impact Analysis

EPA has based its determination about the costs and benefits of the MATS proposal on the 2011 Regulatory Impact Analysis (RIA).[8] The RIA, however, did not include important information that would have fully informed the estimates of the benefits of controlling HAP emissions. In a December 14, 2018 memorandum to the docket, EPA described significant underestimations in the calculation of the true benefits of controlling HAPs from EGUs: "EPA also identified a number of unquantified HAP-related benefits of MATS in the 2011 RIA. There are other neurologic, cardiovascular, genotoxic, and immunotoxic effects associated with exposures to mercury, including impacts on motor skills and attention/behavior, for which it was not possible to quantify the estimated value of the MATS rule." Additionally, "[d]ata and methodological limitations also prevented us from estimating the economic value of impacts from reductions in other HAPs such as arsenic, benzene, cadmium, chlorine, formaldehyde, lead, manganese, nickel and selenium that may be emitted from coal- and oil-fired EGUs."[9]

Further, the RIA focused on the health effects associated with consuming only recreationally caught freshwater fish and did not quantify exposures that include consumption of commercial seafood and fish from estuaries, coastal waters and the deep ocean. Reportedly, the consumption of marine fish, often harvested from coastal waters in the United States, accounts for more than 80 percent of methylmercury intake by the population of this country.[10]

There is recent relevant research showing that the monetized benefits of reducing EGU mercury emissions in the U.S. are likely in the range of several billion dollars per year.[11] These

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[7] https://www.supremecourt.gov/opinions/14pdf/14-46_bqmc.pdf, p. 14 (p. 16 of the PDF), section D.

[8] *Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards* [EPA-452/R-11-011], December 2011, available at https://www.regulations.gov/document?D=EPA-HQ-OAR-2009-0234-20131.

[9] *Compliance Cost, HAP Benefits, and Ancillary Co-Pollutant Benefits for "National Emission Standards for Hazardous Air Pollutants: Coal-and Oil-Fired Electric Utility Steam Generating Units -- Reconsideration of Supplemental Finding and Residual Risk and Technology Review*, December 14, 2018, p. 3, available at https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0794-0007.

[10] Sunderland, E. M.; Li, M.; Bullard, K. 2018. "Decadal Changes in the Edible Supply of Seafood and Methylmercury Exposure in the United States". *Environ. Health Persp*. DOI: 10.1289/EHP2644, January 16, 2018, available at https://www.ncbi.nlm.nih.gov/pubmed/29342451.

[11] Rice, G.E., Hammitt, J.K, and Evans, J.S. 2010. A probabilistic characterization of the health benefits of reducing methyl mercury intake in the United States. *Environ Sci Technol*. 1;44(13):516-24. DOI:10.1021/es903359u; Giang, A., Selin, N. E. Benefits of mercury controls for the United States. *Proc. Natl. Acad. Sci. U. S. A.* 2016, 113, 286. DOI: 10.1073/pnas.1514395113; Sunderland, E.M., Driscoll, Jr., C.T., Hammitt, J.K., Grandjean, P., Evans, J.S., Blum, J.D., Chen, C.Y., Evers, D.C., Jaffe, D.A., Mason, R.P., Goho, S., Jacobs, W. 2016. Benefits of Regulating

and other studies support the conclusion that the mercury-related benefits from MATS are orders of magnitude larger than estimated in the RIA.[12]

In addition to underestimating the benefits, the RIA also does not provide an accurate and updated picture regarding the true compliance costs of MATS. For example, the RIA predicted electricity generated by coal to be 2,002 billion kilowatt-hours (BkWh) in 2020, while more recent forecasts indicate it will be 1,024 BkWh.[13] Fewer units are subject to MATS due to changeovers to cheaper natural gas, resulting in overall lower costs to industry than were predicted.

In light of the importance of MATS and the profound impact this proposal could have, EPA must base its rulemaking on sufficient and up-to-date information.

RESIDUAL RISK AND TECHNOLOGY REVIEW

NACAA has reviewed the provisions related to EPA's Residual Risk and Technology Review (RTR) proposal and offers several comments about the methodology below. Before doing so, however, it is necessary to make a general observation. EPA stated in the proposal the following: "The results of the residual risk analysis indicate that residual risks due to emissions of air toxics from this source category are acceptable and that the current standards provide an ample margin of safety."[14] This is an acknowledgement on the part of EPA that the agency believes the MATS rule has accomplished its goal. It is incongruous, then, that EPA would propose to undermine and jeopardize MATS in the very same rulemaking in which the agency states that the regulation itself was responsible for lowering risk to an acceptable level.

Concentrations at Census Tract Centroids

In assessing the cancer risks related to the source category, EPA used long-term concentrations affecting the census blocks within 50 kilometers of each facility.[15] This analysis dilutes the effect of sources' emissions by estimating the impact at the centroid of the census block instead of at the property line or wherever the maximum exposed individual is. Census blocks can be large geographically, depending on the population density, so the maximum point of impact can be far from the centroid. It could be elsewhere in the census block, including at or near the property line where people may live or work. EPA itself alludes to this problem in the proposal.[16] Further, even if the area near the property line is not developed, over time homes and businesses could locate closer to the facility. While it is possible that population distribution is homogenous over a census block, this assumption is not necessarily accurate in considering the predicted impacts from the location of a source. EPA should identify and use the truly maximum

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Hazardous Air Pollutants from Coal and Oil-Fired Utilities in the United States. *Environ Sci Technol*. 50 (5), 2117-20. DOI: 10.1021/acs.est.6b00239.

[12] Giang, A.; Selin, N. E. Benefits of mercury controls for the United States. *Proc. Natl. Acad. Sci. U. S. A.* 2016, 113, 286. DOI: 10.1073/pnas.1514395113.

[13] Annual Energy Outlook 2019 *Table of Electricity Supply, Disposition, Prices and Emissions* (Table 8). U.S. Energy Information Administration, January 24, 2019, available at https://www.eia.gov/outlooks/aeo/.

[14] 84 *Federal Register* 2670.

[15] 84 *Federal Register* 2690.

[16] 84 *Federal Register* 2695.

individual risk, irrespective of its location in the census block, rather than using the predicted chronic exposures at the census block centroid as surrogates for the exposure concentrations for all people living in that block.

Facility-Wide and Cumulative Risks

EPA has recognized the importance of considering the impact of emissions from all HAP-emitting operations in a facility to determine the facility-wide and cumulative risks, rather than focusing solely on the source category that is the subject of the regulation.[17] EPA should ameliorate risks from HAP exposure in this regulation as well as in rules for other source categories that may contribute to the risks identified in this rulemaking.

Acute Exposure

Previous NACAA comments have raised concerns with EPA's use of Acute Exposure Guideline Levels (AEGLs) or Emergency Response Planning Guidelines (ERPGs) values to address acute exposures in the residual risk assessments. It appears EPA is still using them for those purposes in this proposal.[18] These limits were developed for accident release emergency planning and are not appropriate for assessing daily human exposure scenarios. In the December 2002 EPA document, "A Review of the Reference Dose and Reference Concentration Processes," EPA stated that the primary purpose of the AEGL program is to develop guidelines for once-in-a-lifetime short-term exposures to airborne concentrations of acutely toxic chemicals. They are not meant to evaluate the acute impacts from routine emissions that occur over the life of a facility. Unlike the reference concentrations (RfCs) for chronic exposures, the AEGLs and ERPGs do not include adequate safety and uncertainty factors and cannot be relied upon to protect the public from the adverse effects of exposure to toxic air pollutants. The use of AEGLs or ERPGs in residual risk assessments is not appropriate and does not ensure that public health is adequately protected from the acute impacts of HAP exposure. EPA has correctly included the use of the California Reference Exposure Levels (RELs) to address acute exposures in the residual risk assessments and the agency should continue to use the RELs for these assessments.[19]

Allowable Emissions

EPA should consider potential or allowable emissions, rather than actual emissions, as much as possible in evaluating residual risk. Since facility emissions could increase over time for a variety of reasons, and with them the associated impacts, the use of potential or allowable emissions is more appropriate. An analysis based on actual emissions from a single point in time could underestimate the residual risk from a source category. Further, the major source HAP thresholds are based on maximum potential-to-emit, as opposed to actual emissions, and air agencies issue permits based on potential emissions. Limiting the scope of a risk evaluation to actual emissions would be inconsistent with the applicability section of Part 63 rules. EPA used allowable emissions in parts of the rulemaking, but continues to use actual emissions in other

[17] 84 *Federal Register* 2687.
[18] 84 *Federal Register* 2691.
[19] 84 *Federal Register* 2691.

parts of its assessment.[20] The agency should use allowable emissions in the future, including in assessing acute health risks.

ESTABLISHMENT OF A NEW SUBCATEGORY

EPA is soliciting comment on the establishment of a subcategory for emissions of acid gas HAP from existing EGUs firing eastern bituminous coal refuse. The overwhelming majority of the affected sources have already complied with the existing regulation. We question the necessity of embarking on a resource-intensive process to develop a separate subcategory when multiple sources have proven that the current standards are achievable. There is also a question of fairness, since many of these sources have already spent resources to comply in a timely manner and would be placed at an economic disadvantage, particularly for sources located in competitive generating markets.

CONCLUSION

In summary, in light of the significant emission decreases that have already occurred and will continue to take place as a result of MATS, and the important benefits to public health that are resulting from these emission reductions, it is critically important that EPA ensure the ongoing success of MATS. EPA must not eliminate or diminish the consideration of co-benefits in analyzing the costs and benefits associated with MATS (or other regulations) and the agency must abandon its proposal to reverse the appropriate and necessary finding related to MATS.

Additionally, EPA should consider the suggestions and issues raised in these comments related to the risk assessment methodology for the RTR and EPA should reconsider the need for an additional subcategory when most sources in the subcategory have already complied.

Thank you for this opportunity to comment on the proposal. Please contact us or Mary Sullivan Douglas at NACAA (mdouglas@4cleanair.org) if we can provide additional information.

Sincerely,

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[20] 84 *Federal Register* 2689.