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U.S. Environmental Protection Agency
EPA Docket Center
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Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

RE: National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units, Proposed Rule, Docket ID No. EPA–HQ–OAR–2018–0794

To Whom It May Concern:

The Midwest Ozone Group ("MOG")[1] is pleased to offer these comments regarding EPA's June 17, 2025, proposal (90 Fed. Reg. 25,535) to repeal specific amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-Fired Electric Utility Steam Generating Units (EGUs),

[1] The membership of the Midwest Ozone Group include: Ameren, American Electric Power, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Appalachian Region Independent Power Producers Association, Associated Electric Cooperative, Berkshire Hathaway Energy, Big Rivers Electric Corp., Citizens Energy Group, City Water, Light & Power (Springfield IL), Cleveland-Cliffs Inc., Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, ExxonMobil, Monongahela Power Company, Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Municipal Power Agency, Indiana Utility Group, Hoosier Energy REC, inc., LGE/ KU, Marathon Petroleum Company, National Lime Association, North American Stainless, Nucor Corporation, Ohio Utility Group, Ohio Valley Electric Corporation, Olympus Power, Steel Manufacturers Association, and Wabash Valley Power Alliance.

commonly referred to as the Mercury and Air Toxics Standards (MATS), that were promulgated on May 7, 2024. EPA specifically proposes to repeal the revised filterable particulate matter (fPM) emission standard, which serves as a surrogate for non-mercury hazardous air pollutant (HAP) metals for existing coal-fired EGUs; the revised fPM emission standard compliance demonstration requirements; and the revised mercury (Hg) emission standard for lignite-fired EGUs and seeks comments regarding a number of issues. In addition, EPA proposes to reinstate the Low Emitting EGU (LEE) program for fPM and non-Hg HAP metals and to retain updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. Comments are due August 11, 2025.

I. REGULATORY BACKGROUND

On May 7, 2024, EPA finalized (89 Fed. Reg. 38,508) amendments to the NESHAP for the MATS. Specifically, EPA revised the surrogate standard for nonmercury (Hg) metal HAP (filterable particulate matter (fPM)) for existing coal-fired EGUs; the fPM compliance demonstration requirements; the Hg standard for lignite-fired EGUs; and the definition of startup. EPA noted in its 2024 rule that "[t]hese final amendments are the result of the EPA's review of the 2020 Residual Risk and Technology Review (RTR)" The 2024 final rule essentially adopted the revisions as proposed in 2023.

On April 24, 2023, EPA proposed (88 Fed. Reg. 24,584) to amend the NESHAP for the MATS. Specifically, EPA proposed to amend the surrogate standard for nonmercury (Hg) metal HAP (filterable particulate matter (fPM)) for existing coal-fired EGUs; the fPM compliance demonstration requirements; the Hg standard for lignite-fired EGUs; and the definition of startup. EPA noted in its 2023 proposal that "[t]hese proposed amendments are the result of the EPA's review of the May 22, 2020, residual risk and technology review (RTR) of MATS."

In its 2023 proposal, EPA sought comments regarding several specific issues that directly impact MOG Members. In addition to the specific issues on which EPA sought comments, MOG offered the attached comments, which are identified in Exhibit A and are hereby incorporated by reference, on the following issues impacting its Members, comments which are still germane to the 2024 final rule ("Final Rule").

(a) The Final Rule fails to appropriately balance CAA section 112's direction to achieve the maximum degree of emissions reductions while taking into account the statutory factors, including cost.
(b) A standard of 6.0E–03 lb/MMBtu or lower (for example 2.4E–03 lb/MMBtu, which is the average emission of the best performing 50 percent of units evaluated) would represent a better balancing of the statutory factors.
(c) The Final Rule fails to assess control technology effectiveness and cost assumptions.
(d) The Final Rule fails to accurately assess the variability of fPM emissions.
(e) EPA grossly underestimated the cost of installing and operating PM CEMS in the Final Rule
(f) The basis of the Final Rule overestimated the need for continued quarterly testing of units with binding schedules for retirement.
(g) The Final Rule overestimated costs, including some of the generation and storage technologies discussed in the rule as well as the cost of PM controls themselves.
(h) IPM model data for PM does not agree with the 0.010 lb/MMBtu operating rate for units subject to the MATS.
(i) The CAA does not authorize the promulgation of a rule based 100% on co-benefits as was done with the final rule.
(j) The CAA does not authorize EPA to assign benefits to a PM rule that includes benefits in areas attaining the PM or ozone NAAQS.
(k) The Final Rule's choice of only two quarters and a portion of a third quarter in which the quarter selected includes lowest unit PM emissions from its data base of quarterly data between 2017 and 2021 is arbitrary and capricious.
(l) CAA Section 112 does not support the Final Rule action to reduce emissions for a category for which there is no, or very low residual risk identified.
(m) The Final Rule continues to ignore grid reliability concerns.

II. LITIGATION BACKGROUND

In addition to the flaws noted above, MOG believes that the 2024 Final Rule was and is legally deficient for a number of reasons that have been raised in the ongoing MATS litigation.

A. EPA Has Not Demonstrated that the Rule is "Necessary."

Clean Air Act Section (CAA) 112(d)(6) permits EPA to revise emission standards only if doing so is "necessary" after considering, among other things, "developments" in control technologies, practices, or processes. EPA has admitted that HAP emissions from coal-fired power plants are already below levels of public health concern. It nevertheless maintains that these tightened standards were "necessary" because they are "achievable" under Section 112(d)(2). That misconstrues Section 112(d), reading one word ("achievable") into the statute and deleting the word that is actually there ("necessary"). Moreover, even if EPA were correct as to other source categories, it ignores that Congress singled out power plants for special treatment, subjecting them to regulation only as "appropriate and necessary" for "public health." 42 U.S.C. § 7412(n)(1)(A). Section 112(d)(6)'s "necessary" inquiry cannot lose sight of that.

B. EPA Overlooks the Act's Unique Treatment of Power Plants.

CAA Section 112(n)(1)(A) directs EPA to "regulate" power plants "under this section" *only if* "appropriate and necessary" after studying "*the hazards to public health* reasonably anticipated to occur as a result of" their emissions. 42 U.S.C. § 7412(n)(1)(A) (emphasis added). The statute thus announces, on its face, Congress's objective when it comes to regulating hazardous air pollutants from power plants: protecting public health. The specific context of power plant emission standards therefore demands that in order for the MATS rule revisions to be "necessary" they must protect public health. Congress directed EPA to study the effect of power plant HAP emissions on public health after imposition of the Act's other requirements, and then to "regulate" power plants under Section 112 only if "appropriate and necessary." 42 U.S.C. § 7412(n)(1)(A). This congressional compromise—unique to power plants—sought to "provide 'protection of the public health while avoiding the imposition of excessive and unnecessary costs on ... consumers of electricity.'" *Id.* (quoting 1 A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 1417 (1993) (LEGISLATIVE HISTORY). The Supreme Court has squarely held that the "appropriate and necessary" finding must account for both the benefits and costs of regulating power plants under Section 112. *See Michigan*, 576 U.S. at 752-53.

EPA was therefore wrong in the promulgation of the Final Rule to claim that Congress's "deliberate policy choice" was to allow "...control of toxic emissions to a greater degree than may be required to address assessed risk to public health..."

EPA Br. 32. When it comes to power plants, Congress's "deliberate policy choice" was instead to balance the need to protect public health against the need to protect ordinary consumers from "'unwarranted financial burdens.'" *White Stallion*, 748 F.3d at 1264 (Kavanaugh, J., dissenting) (quoting LEGISLATIVE HISTORY at 1416). This congressional compromise would have little force if EPA could revise emission limits meant to address public health under a different standard, to advance other goals, after the original public health objective was met.

Ultimately, in trying to read Section 112 "in a way that 'harmonizes' the program's treatment of power plants with its treatment of other sources," the Final Rule repeats its error from *Michigan v. EPA*. 576 U.S. at 756. And in doing so, the Final Rule again "overlooks the whole point of having a separate provision about power plants: treating power plants *differently* from other stationary sources." *Id*. The Final Rule's "preference for symmetry cannot trump an asymmetrical statute." *Id*. at 757.

C. EPA Did Not Identify Any "Development" in the Rule that Authorizes Revising Emission Standards Under Section 112(d)(6).

EPA claimed in its brief that the "developments" that support its revision of the emission standards include trends in control efficiency, costs, and technological improvements since 2012. EPA Br. 38. But that is not what EPA stated in the rulemaking. In the 2023 proposed rule, EPA said:

> Although our review of fPM compliance data for coal-fired EGUs indicated no new practices, processes, or control technologies for non-Hg metal HAP, it revealed two important developments that inform the EPA's decision to propose revisions to the standard. ***First,*** it revealed that most existing coal-fired EGUs are reporting fPM well below the current fPM limit ... ***Second,*** it revealed that the fleet is achieving these performance levels at lower costs than assumed during promulgation of the original MATS fPM emission limit. J.A._(88 Fed. Reg. 24,854, 24,868 (Apr. 24, 2023)) (emphasis added).

In particular, with respect to the standard for fPM ... and the standard for Hg from EGUs that burn lignite coal, the EPA proposed in 2023 to conclude that developments since 2012 – and in particular the fact that the majority of sources are vastly outperforming the MACT standards with control technologies that are cheaper and more effective than the EPA forecast ... warrant strengthening these standards. J.A.(88 Fed. Reg. at 24,856).

> And in the Final Rule, EPA said:
> ... our judgments regarding developments in fPM control technology for the revised fPM standards as a surrogate for non-Hg HAP metals largely reflect that the fleet was reporting fPM emission rates well below the current standard and with lower costs than estimated during promulgation of the 2012 MATS Final Rule ... J.A.__(89 Fed. Reg. 38508, 38519 (May 7, 2024)).

In other words, EPA's theory about what may lawfully constitute a "development" under Section 112(d)(6) is that (1) power plants have been meeting the 2012 standards (2) at lower costs than previously estimated. That is fundamentally different from what the agency now claims in its brief (i.e., trends in control efficiency, etc.). The Court should reject EPA's *post hoc* rationalizations. *Bowen v. Georgetown University Hosp.*, 488 U.S. 204, 213 (1988).

Furthermore, what constitutes a "development" under Section 112(d)(6) is a question of statutory construction to which the court owes EPA no deference under *Loper Bright.* This Court must evaluate whether EPA's interpretation of Section 112(d)(6) is "the best reading of the statute"—and, it is not.

If EPA's statutory interpretation in the Final Rule were to be upheld, it would strip away the limits on EPA's authority that Congress intentionally imposed under Section 112(d)(6). Regulated entities must meet MACT standards at all times, and they must do so with a compliance margin. Interpreting that compliance as a "development" would allow (or perhaps require) EPA to revise downward every one of the hundreds of MACT standards at least every 8 years in perpetuity. EPA itself has acknowledged that is not what Congress intended. J.A.__(70 Fed. Reg. 19992, 20008 (Apr. 15, 2005)) ("We reiterate that there is no indication that Congress intended for section 112(d)(6) to inexorably force existing source standards progressively lower and lower in each successive review.").

D. The Rule is Arbitrary and Capricious.

The 2024 Final Rule is arbitrary and capricious because the record demonstrates that its enormous costs are balanced against no relevant meaningful public health benefit. The 2024 Final Rule is also arbitrary and capricious because EPA's revised emission limits are based on unsupported and arbitrary data, EPA did not adequately consider the rule's substantial impacts on the power grid, and the

Final Rule is pretextual. *See Motor Vehicle Mfrs. Ass'n v. State Farm*, 463 U.S. at 43.

EPA has acknowledged in the MATS litigation that rulemaking under Section 112(d)(6) requires appropriate consideration of both costs and benefits. *see also* 89 Fed. Reg. at 38,553 (claiming that "when all of the costs and benefits are considered (including nonmonetized benefits), this final rule is a worthwhile exercise of" the agency's authority). Yet EPA has not disputed that:

- The Final Rule does not produce a single quantified benefit related to the mandated reduction in HAP emissions. 89 Fed. Reg. at 38,511;
- EPA may not rely on the alleged ancillary benefits of the Final Rule to justify its costs …indeed, EPA does not even mention the alleged ancillary benefits of in its response; and
- Even if alleged ancillary benefits are counted, the costs outweigh the quantified benefits by more than $400 million.

Instead, EPA responded by saying that a quantified cost-benefit analysis was unnecessary. Nonetheless, reasoned decision-making requires substantive attention to advantages and disadvantages, and it is arbitrary to require massive costs for de-minimis (if any) relevant benefits. There is no dispute that EPA concluded that, without the 2024 Final Rule's more stringent standards, public health would already be protected, with an ample margin of safety. In fact, risk to public health was so immaterial, it was an order of magnitude below the level at which Congress has said EPA could deregulate the source under Section 112 entirely.

The failure to quantify the 2024 Final Rule's alleged relevant benefits, should cast a shadow of skepticism, because "[w]ithout quantified benefits to compare against costs, it is not apparent just how the agency went about weighing the benefits against the costs." *GPA Midstream Ass'n v. DOT*, 67 F.4th 1188, 1200 (D.C. Cir. 2023); *see also Michigan*, 576 U.S. at 752.

E. EPA's Cost-Effectiveness Analysis is Arbitrary and Capricious.

There is no dispute that the 2024 Final Rule was and is among the least cost-effective rules EPA has ever adopted in terms of costs imposed per amount of HAP emissions reduced. Indeed, the 2024 Final Rule explicitly recognized that the cost-effectiveness values are significantly higher than ratios EPA has found to be not cost-effective in prior rules. Those prior rules addressed the same pollutants and under the same Section 112(d)(6) standard.

EPA engaged in handwaving to dismiss the stark cost-ineffectiveness of the 2024 Final Rule's revised fPM standard, stating that comparing it to prior rulemakings is "inapt" because the latter regulated different industries. But the Final Rule did not offer any explanation of why prior rulemakings should not be taken into account, especially as EPA "will often consider what estimates it has deemed cost effective in prior rulemakings" when evaluating the cost-effectiveness of a rule. Indeed, EPA did so in *every* rulemaking it pointed to as support for its novel cost considerations in this Rule. The whole point of a cost-effectiveness calculation is to compare multiple factors, including cost-effectiveness across different industries and in prior rulemakings. *Sierra Club v. EPA*, 353 F.3d 976, 986 (D.C. Cir. 2004).

Moreover, the defense of the Final Rule's cost-effectiveness ratio is made worse by the fact that it egregiously undercounts the number of facilities that must install additional controls. For instance, in supporting the Final Rule EPA claimed that only 33 units would incur compliance costs, but far more than 33 units would need to incur costs to comply with the revised fPM standard; it is simply untrue that most power plants have already paid for the necessary controls. EPA has continually failed to engage with the crucial points raised in the litigation and instead promulgated a historically cost-ineffective rule with no reasoned justification.

Further, arguments that compliance costs will be a "'small fraction' of power plants' revenue" is misleading at best. "Power plants' revenue" is not a relevant measure when EPA itself claimed that 90% of the power sector would not incur costs of the 2024 Final Rule. But EPA cannot have it both ways; either EPA was correct that only 33 units must incur compliance costs, in which case the revenue of an entire industry is an irrelevant measure, or petitioners are correct that many more facilities must install additional costly emissions controls, in which case EPA has failed to acknowledge (much less consider) that costs are necessarily much higher than EPA claims.

F. EPA's Grid Reliability Analysis is Arbitrary and Capricious.

EPA's briefing on grid reliability in the MATS litigation, much like its response to comments during the rulemaking process, failed to engage with the facts and law presented. EPA does not dispute that for CAA Section 112, "'[c]osts' can mean many different things, including the cost associated with increased risk" of grid unreliability. *Del. Dep't of Nat. Res. & Envtl. Control v. EPA*, 785 F.3d 1, 18 (D.C. Cir. 2015). EPA claimed that it "has expertise to assess the impacts of its regulations

on grid reliability," but cited nothing to support that statement other than the existence of the CAA. In reality, "EPA has no expertise on grid reliability." *Texas v. EPA*, 829 F.3d. 405, 432 (5th Cir. 2016). Due to that lack of expertise on grid reliability, "EPA 'must support its arguments more thoroughly than in those areas in which it has considerable expertise and knowledge.'" *Id*. EPA does not do so.

EPA's insistence on pushing aside warnings from grid operators, states, and industry that its assumptions regarding power grid reliability were incorrect "simply ignore[s] 'an important aspect of the problem,'" which is the hallmark of arbitrary and capricious decision-making. *Ohio v. EPA*, 144 S. Ct. 2040, 2051 (2024) (citation omitted); *see also Del. Dep't of Nat. Res*., 785 F.3d at 14 ("EPA should have, but did not, respond properly to their well-founded concerns" about grid reliability). The record is devoid of evidence showing that EPA meaningfully considered input from the current grid operators or power plants in its grid reliability modeling inputs, or that it changed those inputs in response to comments.

EPA's defense of its "state-of-the-art, peer-reviewed model," is yet another strawman argument. Petitioners' argument in the litigation was not that EPA's model was inappropriate, but instead that EPA unreasonably ignored real-world evidence that the model inputs were glaringly incorrect. Even the best model falls prey to "garbage in, garbage out." Consequently, EPA's reliance on *Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1037 (D.C. Cir. 2001) is misplaced. *Appalachian Power* does not suggest that an agency can ignore problems with the inputs to its model, even where the model is otherwise appropriate.

Although EPA claims that it "*did* consult other Federal agencies, reliability experts, and grid operators," there is no evidence in the record that it did so. EPA's sole response is to point to an interagency cooperation memo that pre-dates this rulemaking and does not document any specific inter-agency consultations in connection with *this proposed 2023* rule. The record shows, however, that EPA ignored the grid operators' warnings about the proposed rule. Specifically, the evidence fails to show EPA meaningfully considered information that the nation's power grids are in a materially different and more precarious position than they were in 2012.

As a result of these and other legal flaws in the 2024 final rule, which was finalized essentially as proposed in 2023, MOG urges EPA to finalize the current proposed repeal of that Final Rule except for the updated minimum volume per run

or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See response to question 5 below).

III. PROPOSED RULE COMMENTS.

EPA now proposes to repeal the MATS Final Rule and seeks responses to the following questions:

Question #1: Should the revision of the fPM standard for existing coal-fired EGUs from 0.030 lb/MMBtu to 0.010 lb/ MMBtu be repealed, as proposed, because the cost effectiveness of the revised fPM standard is inconsistent with the EPA's prior CAA section 112(d)(6) technology review determinations for other source categories?

> MOG Response: The 2024 standard of 0.010 lb/MMBtu doesn't appropriately balance the statutory factors given the cost of compliance. CAA Section 112(n)(1)(A) as a statutory factor must be considered when doing a reconsideration of an already completed RTR given EPA's cost effectiveness numbers in the range of $80,000 - $100,000/ton of fPM. Remarkably, the Regulatory Impact Analysis[2] (RIA) of the 2024 final rule, in discussing benefits, concedes that "[t]he estimates of monetized benefits under the final rule are lower than estimated at proposal. While the estimated Hg reductions are higher under the final rule than at proposal, it is important to note that the EPA is unable to quantify the potential benefits of any HAP reductions for this rule. Additionally, while EPA is assuming more filterable PM controls in the final rule, the EPA is unable to quantify the potential benefits of any reductions of non-Hg HAP metals that are expected to result from these controls. Furthermore, because the EPA is no longer projecting any significant change in utilization or capacity at facilities that install additional fPM controls, we do not project major changes in emissions of the criteria and GHG pollutants monetized in the benefit-cost analysis. Consequently, the monetized benefits of the rule are lower than previously projected.' (RIA at page ES-16). Based on the RIA quote cited above, EPA has failed to justify its claim that this proposed rule 'appropriately balances CAA Section 112's direction to achieve the maximum degree of emissions reductions while taking into account the statutory factors, including cost,' when EPA cites no

[2] https://www.epa.gov/system/files/documents/2024-04/2024-mats-rtr-final-ria-final.pdf

benefits provided by the 2024 rule, which was promulgated under the guise of Section 112, for the reduction of Hg and non-Hg metals. With no estimated Hg or non-Hg metal benefits, whatever the estimated compliance cost renders the statutory factors, especially cost, inappropriately balanced whether its control technology effectiveness and cost assumptions are correct, and whether it should finalize a more stringent standard.

For these and the additional reasons articulated above, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See responses to questions 4 and 5 below).

Question #2: Are there other cost-effective and achievable fPM limits for existing coal-fired EGUs that are based on developments in practices, processes, and control technologies that the EPA should consider as an alternative to repealing the 0.010 lb/ MMBtu standard?

MOG response: There are no new developments in process and technology, so a threshold requirement of Section 112(d)(6), that the Administrator shall review and revise the standards "taking into account developments in practices, processes, and control technologies," has not been met. Clean Air Act Section (CAA) 112(d)(6) permits EPA to revise emission standards only if doing so is "necessary" after considering, among other things, "developments" in control technologies, practices, or processes. There are no new developments in process and technology and EPA has admitted that HAP emissions from coal-fired power plants are already below levels of public health concern. It nevertheless maintains that these tightened standards were "necessary" because they are "achievable" under Section 112(d)(2). That misconstrues Section 112(d), reading one word ("achievable") into the statute and deleting the word that is actually there ("necessary").

In addition, based upon publicly available data, EPA has grossly underestimated the cost of installing and operating a PM CEMS, grossly overestimated the cost of stack testing, and has failed to provide the true additional costs of the proposal. For example, according to a June 2023 report styled 'Technical Comments on National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-fired Electric Utility Steam Generating Units Review of Residual Risk and Technology,'[5] of three categories of ESP

upgrades considered by EPA, the cost for the most extensive – a complete rebuild to add collecting plate area – is inadequate. Four such major ESP rebuild projects have been implemented for which costs are reported in the public domain – and not acknowledged by EPA. Incorporating these results elevates the range of cost from EPA's estimate of $75-100/kW to $57-213/kW. Consequently, the 'average' cost for this action used in the cost per ton ($/ton) evaluation increases from $87/kW to $133/kW[5]. As a consequence of under-predicting capital required for ESP 'rebuild', and not recognizing the need for a design and operating margin, EPA under-predicts the number of units requiring retrofit or upgrade by half (20 vs 37). As a result, EPA's estimate of incurred cost of $12,200-$14,700/ton to comply with a PM rate of 0.010 lb/MMBtu is only one quarter of the $47,371/ton average cost projected by units for which there is publicly available data.[3] Another example of EPA underestimating PM CEMS cost is that, based on ongoing supply chain challenges, requirements for specialized installation and significantly higher cost of project management labor, estimated installation cost as high as $350,000 for a PM CEMS. EPA also overstates the cost of individual M5 tests at $15,522, when typical costs can run between $5,000 to $10,000. EPA has thus grossly underestimated the costs of compliance regarding installation, maintenance, and operation of a PM CEMs and grossly overestimated the cost of quarterly testing. At proposal, the EPA estimated that the Equivalent Uniform Annual Cost (EUAC) of PM CEMS was $60,100 (88 Fed Reg 24,873). Based on comments the EPA received on the costs and capabilities of PM CEMS and additional analysis the EPA conducted, the EPA determined that the revised EUAC of PM CEMS is higher than estimated at proposal. The EPA now estimates that the EUAC of non-beta gauge PM CEMS is $72,325 which MOG believes shows that quarterly stack testing is the most cost-effective option for compliance. Therefore, EPA should not have required PM CEMS for compliance because it is not cost effective. Installation of a PM CEMS should remain an option for the EGU sector but not be mandated. A final point regarding cost is that, by eliminating the low emitting EGU (LEE) provisions which allowed once per three year emissions testing as an incentive to be a low emitter, EPA forced massive cost increases on the lowest emitting affected EGUs by requiring continuous emissions monitoring, record keeping, and reporting. In summary, EPA has grossly overestimated costs of stack testing for compliance and grossly underestimated the cost of installation, maintenance, and operation of PM CEMs for compliance.

For these and the additional reasons articulated above, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See responses to questions 4 and 5 below)..

Question #3: Should the quarterly stack testing and PM CEMS compliance demonstration options for the fPM standard be reinstated, as proposed, because other air pollution control indicators can adequately inform operators of malfunctions and that the higher costs for PM CEMS do not outweigh the advantages of more efficient pollutant abatement and more transparency of EGU fPM emissions?

MOG response: EPA states in the preamble to the 2024 Final Rule that "[a]fter considering updated information on the costs for quarterly performance testing compared to the costs of PM CEMS and the measurement capabilities of PM CEMS, as well as the many benefits of using PM CEMS, the EPA is finalizing, as proposed, a requirement that all coal- and oil-fired EGUs demonstrate compliance with the revised fPM emission standard by using PM CEMS." (89 Fed Reg 38,510) A significant factor regarding the reduction in the proposed fPM surrogate emission limit to 0.010 lb/MMBtu is that EPA did not just revise the numerical value, it changed both the compliance determination technique and the averaging period. Further, EPA essentially punished the sources that had met the low LEE limit of the MATS rule (0.015 lb/MMBtu) by eliminating the reward of testing once every three years after a lengthy demonstration of the ability to meet that limit. From a technical standpoint, changing the numerical limit, averaging period and the compliance demonstration techniques amounted to a massive increase in the stringency of the standard compared with either revising the numerical limit without changing the compliance demonstration method or the compliance averaging period, or revising the compliance demonstration method while retaining the same numerical limit and compliance averaging period. If there were to be changes to the numerical emission limit, then there should not have been a change in the compliance demonstration method or the frequency of testing to meet a numerical limit that is only 2/3rds of the fPM emission rate that defined a LEE under the previous rule. For context, to qualify as a fPM LEE, the source had to consistently meet a limit that was only 50% of the fPM limit finalized in the rule. Consequently, implementation of the final rule would reduce the fPM limit by 67% rather than the implied 33%, misrepresenting the reality of the standard. Moreover, the change in the fPM

emission limit from 0.030 to 0.010 (or lower) lb/MMBtu would likely disqualify a source from realizing "low-emitting source" status[3] without any change in source operating practices, procedures, or emission control device performance. Sources that are not "low-emitting sources" and required to install a PM CEMS are subject to more stringent requirements associated with the development of the PM CEMS correlation curve (see Performance Standard 11, Section 13.2), which are exceptionally challenging to develop irrespective of the source emitting status. This is especially true for EGUs that are equipped with fabric filter particulate control devices (baghouses) or equipped with an electrostatic precipitator (ESP) and a flue gas desulfurization system (FGD). Baghouses are the most effective filterable particulate matter control devices available and typically an FGD will control an additional 70% of the filterable particulate matter remaining after the exhaust gas passes through the ESP, which alone removes 98-99% of the fPM. So long as there is not a physical or permitted capability to allow discretionary[3] bypass of the baghouse or ESP/FGD combination, there is no need to require continuous fPM monitoring. With these control equipment devices, which result in extremely low fPM emissions, in place, a requirement to site, procure, install, certify, operate and maintain, quality assure and maintain a data acquisition and handling system to record and maintain records is unnecessary and only serves to increase the cost of the demonstration of compliance with no demonstrated monetized benefit. There is no need to either require emissions measurement more frequently than the current fPM LEE schedule or require the use emissions measurement methods for units equipped with these fPM emissions control equipment devices. Units with these devices would be required to meet a fPM limit that is 33% lower than the current fPM LEE limit of 0.015 lb./MMBtu. In practice, other currently installed monitoring devices are used as an indicator of fPM emissions control performance (e.g., opacity monitor for units installed with a baghouse or dry FGD, mist eliminator pressure drop for units installed with a wet FGD), which also reduces the efficacy of the requirements.

MOG urges EPA to reinstate quarterly stack testing and PM CEMS compliance demonstration options for the fPM standard. Changing the emissions testing requirement, both the test method and frequency of emission

[3] Discretionary excluding emergency bypasses that are required by National Fire Protection Association Codes or American Society of Mechanical Engineers Codes for Boilers and Pressure Vessels.

measurement, after the fact was both unreasonable and possibly illegal. In addition, if a unit is on an enforceable schedule for ceasing coal or oil-fired operations and is qualified as an LEE, already having demonstrated emissions of fPM at a rate below 0.015 lb/MMBtu using quarterly emissions testing over a three year period, then that currently qualified fPM LEE should be allowed to test at the current LEE schedule or annually at most. Quarterly testing of this class of unit provides no environmental benefit and simply adds cost. Accordingly, MOG urges EPA to allow use of the aforementioned testing schedules for these units with enforceable schedules for ceasing coal or oil-fired operations until such time as they cease coal or oil-fired operations as set forth in the applicable enforceable schedule.

For these and the additional reasons articulated above, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See responses to questions 4 and 5 below)..

Question #4: Should the LEE program for fPM and non-Hg HAP metals be reinstated, as proposed?

MOG response: A significant factor regarding the reduction in the 2024 Final Rule fPM surrogate emission limit to 0.010 lb/MMBtu was that EPA was not just revising the numerical value, it was changing both the compliance determination technique and the averaging period. Further, EPA essentially punished the sources that had met the LEE limit of the MATS rule (0.015 lb/MMBtu) by eliminating the reward of testing once every three years after a lengthy demonstration of the ability to meet that limit. From a technical standpoint, changing the numerical limit, averaging period and the compliance demonstration techniques amounts to a massive increase in the stringency of the standard compared with either revising the numerical limit without changing the compliance demonstration method or the compliance averaging period, or revising the compliance demonstration method while retaining the same numerical limit and compliance averaging period. If there were to be changes to the numerical emission limit, then there should not have been a change to the compliance demonstration method or to the frequency of testing to meet a numerical limit that is only 2/3rds of the fPM emission rate that defined a LEE under the previous rule. For context, to qualify as a fPM LEE, the source had to consistently meet a limit that was only 50% of the fPM

limit finalized in the rule. Consequently, implementation of the 2024 final rule would reduce the fPM limit by 67% rather than the implied 33%, misrepresenting the reality of the standard. Moreover, the change in the fPM emission limit from 0.030 to 0.010 (or lower) lb/MMBtu would likely disqualify a source from realizing "low-emitting source" status[5] without any change in source operating practices, procedures, or emission control device performance. Sources that were not "low-emitting sources" and required to install a PM CEMS would have been subject to more stringent requirements associated with the development of the PM CEMS correlation curve (see Performance Standard 11, Section 13.2), which are exceptionally challenging to develop irrespective of the source emitting status. This is especially true for EGUs that are equipped with fabric filter particulate control devices (baghouses) or equipped with an electrostatic precipitator (ESP) and a flue gas desulfurization system (FGD). Baghouses are the most effective filterable particulate matter control devices available and typically an FGD will control an additional 70% of the filterable particulate matter remaining after the exhaust gas passes through the ESP, which alone removes 98-99% of the fPM. So long as there is not a physical or permitted capability to allow discretionary[4] bypass of the baghouse or ESP/FGD combination, there was no need to require continuous fPM monitoring. With these control equipment devices, which result in extremely low fPM emissions, in place, a requirement to site, procure, install, certify, operate and maintain, quality assure and maintain a data acquisition and handling system to record and maintain records is unnecessary and only serves to increase the cost of the demonstration of compliance with no demonstrated monetized benefit. There was no need to either require emissions measurement more frequently than the current fPM LEE schedule or require the use emissions measurement methods for units equipped with these fPM emissions control equipment devices. Units with these devices are now required to meet a fPM limit that is 33% lower than the current fPM LEE limit of 0.015 lb./MMBtu. In practice, other currently installed monitoring devices are used as an indicator of fPM emissions control performance (e.g., opacity monitor for units installed with a baghouse or dry FGD, mist eliminator pressure drop for units installed with a wet FGD), which also reduces the efficacy of the proposed requirements.

For these and the additional reasons articulated above, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum

mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See response to question 5 below).

Question #5: Should the EPA retain, as proposed, the updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs?

MOG believes that EGUs can produce and have produced accurate PM data with lower catch volumes than the 2024 Final Rule increase in minimum collection volumes. Increasing minimum catch volume will result in as much as tripling stack test required run times, and introduce uncertainty as to whether minimum catch was achieved. Stack test costs will rise significantly due to the increase in test duration. The extended stack testing time will also limit the ability of EGUs to vary generation as they must do in real time to respond to fluctuations in demand, compromising grid reliability.

Accordingly, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program (see response to question 4 above), and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. .

Question #8: Should the Agency consider whether, when weighing the costs associated with developments under a CAA section 112(d)(6) technology review, there would be any meaningful risk reduction from reductions in HAP emissions based on potential revisions to emission standards resulting from those developments?

MOG response: Clean Air Act Section 109(b)(1) requires that NAAQS established by EPA ”shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.“ (emphasis supplied) EPA has established PM NAAQS and the majority of the monitors in the United States are in attainment with the current PM NAAQS. EPA explained its benefits calculation in the 2024 Final Rule RIA as follows: “[t]he estimates of monetized benefits under the final rule are lower than estimated at proposal. While the estimated Hg reductions are higher under the final rule than at proposal, it is important to note that the EPA is unable to quantify the potential benefits of any HAP reductions for this rule.

Additionally, while EPA is assuming more filterable PM controls in the final rule, the EPA is unable to quantify the potential benefits of any reductions of non-Hg HAP metals that are expected to result from these controls. Furthermore, because the EPA is no longer projecting any significant change in utilization or capacity at facilities that install additional fPM controls, we do not project major changes in emissions of the criteria and GHG pollutants monetized in the benefit-cost analysis. Consequently, the monetized benefits of the rule are lower than previously projected." (RIA at ES-16). EPA failed to provide an accurate estimate of health benefits in 2024, in part because of a lack of time, and has provided none since. In addition, the 2024 RIA states that '[t]he benefit of the reduction in each health risk is based on the exposed individual's willingness to pay (WTP) for the risk change…' (RIA at 4-13) rather than on the air quality improvements in specific areas resulting from implementation of the proposed rule. Since much of the country is in attainment with the current PM and ozone NAAQS, which by law are established at levels required to protect human health with an adequate margin of safety, it is not appropriate to include as benefits the monetization of health improvements resulting from implementation of the proposed rule that might occur due to possible reductions in criteria pollutants (e.g., ozone and PM) in areas that are already attaining the PM or ozone NAAQS. In addition, EPA made the erroneous assumption that all PM is the same when, in fact, it is well documented that different species of PM are more deleterious to human health than others.

In addition, there are no new developments in process and technology, so a threshold requirement of Section 112(d)(6), that the Administrator shall review and revise the standards "taking into account developments in practices, processes, and control technologies," has not been met.

For these and the additional reasons articulated above, MOG urges EPA to repeal the current proposed rule 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs. (See responses to questions 4 and 5 above).

Question #9: Are there reliance interests implicated by the proposed repeal of the 2024 revised standards that the EPA should consider in this rulemaking?

MOG believes there are clear reliance interests of impacted stakeholders involved in the proposed repeal because, as was made clear in the 2023 MOG comments, the existing rule results in significant negative impacts on the power grid. Even though the effective date of the 2024 standards is not until July 8, 2027, the lead time for planning and implementing controls and policies to comply with rules is lengthy, many times involving years. As MOG stated in its comments on the 2023 proposed rule, which was finalized essentially as proposed in 2024, "[t]he issue is captured most succinctly and most recently in testimony of PJM Interconnection President and CEO Manu Asthana who, in testimony before the United States Senate Committee on Energy & Natural Resources on June 1, 2023, said that "[c]urrently, the nation is developing environmental and reliability policy in separate silos with limited and not very transparent coordination between the environmental and reliability regulators. Increased coordination and synchronization of the nation's environmental and reliability needs may require discrete changes to the statutes governing each agency's mission to embrace this effort. But the time may be ripe to initiate these statutory changes so that each regulator has both the authority and ability to develop policies that harmonize and meet both the nation's reliability and environmental goals."

More recently, on July 7, 2025, the US Department of Energy (DOE) published a report titled "Evaluating the Reliability and Security of the United States Electric Grid." The report was prepared by DOE in collaboration with Pacific Northwest National Laboratory (PNNL) and National Renewable Energy Laboratory (NREL) and was prepared in response to two Executive Orders by President Trump, Executive Order 14262, "Strengthening the Reliability and Security of the United States Electric Grid (April 8, 2025)," and EO 14156, "Declaring a National Emergency (Jan. 20, 2025)".

Significantly, the key takeaways from the report include:

- Status Quo is Unsustainable. The status quo of more generation retirements and less dependable replacement generation is neither consistent with winning the AI race and ensuring affordable energy for all Americans, nor with continued grid reliability (ensuring "resource adequacy"). Absent intervention, it is impossible for the nation's bulk power system to meet the AI growth requirements while maintaining a reliable power grid and keeping energy costs low for our citizens.
- Grid Growth Must Match Pace of AI Innovation. The magnitude and speed of projected load growth cannot be met with existing approaches to load

addition and grid management. The situation necessitates a radical change to unleash the transformative potential of innovation.

- Retirements Plus Load Growth Increase Risk of Power Outages by 100x in 2030. The retirement of firm power capacity is exacerbating the resource adequacy problem. 104 GW of firm capacity are set for retirement by 2030. This capacity is not being replaced on a one-to-one basis and losing this generation could lead to significant outages when weather conditions do not accommodate wind and solar generation. In the "plant closures" scenario of this analysis, annual loss of load hours (LOLH) increased by a factor of a hundred.
- Planned Supply Falls Short, Reliability is at Risk. The 104 GW of retirements are projected to be replaced by 209 GW of new generation by 2030; however, only 22 GW would come from firm baseload generation sources. Even assuming no retirements, the model found increased risk of outages in 2030 by a factor of 34.
- Old Tools Won't Solve New Problems. Antiquated approaches to evaluating resource adequacy do not sufficiently account for the realities of planning and operating modern power grids. At a minimum, modern methods of evaluating resource adequacy need to incorporate frequency, magnitude, and duration of power outages; move beyond exclusively analyzing peak load time periods; and develop integrated models to enable proper analysis of increasing reliance on neighboring grids.

MOG believes that it is clear that the existing grid is compromised by regulations including the 2024 MATS Final Rule and that the looming MATS compliance deadline is a negative reliance interest of impacted EGU stakeholders that mandates unacceptable compliance decisions by EGUs today.

IV. CONCLUSION

For all of the aforementioned reasons MOG urges EPA to expeditiously move to repeal the 2024 Final Rule, reinstate the LEE program, and not to retain the proposed updated minimum volume per run or minimum mass per run requirements for fPM compliance demonstration for coal-fired and IGCC EGUs.

Very truly yours,

Edward "Skipp" Kropp

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