

The National Rural Electric
Cooperative Association

Comments on

Proposed National Emission Standards for Hazardous Air Pollution: Coal-and Oil-
Fired Electric Utility Steam Generating Units Review of the Residual Risk and
Technology Review

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by

Rae E. Cronmiller

Environmental Counsel

4301 Wilson Boulevard, EU 11-249

Arlington, VA. 22203-1860

(703) 907-5791 / rae.cronmiller@nreca.coop

NRECA and the Electric Cooperative Profile

The National Rural Electric Cooperative Association (NRECA) appreciates the opportunity to comment on the Proposed National Emission Standards for Hazardous Air Pollution: Coal-and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review, hereinafter referred to as the EGU RTR.

NRECA is the national service organization for America's Electric Cooperatives. The nation's member-owned, not-for-profit electric cooperatives are a unique sector of the electric utility industry, providing reliable, affordable, and responsible electricity remains the shared commitment of NRECA's members. For over 80 years, electric cooperatives have responded to the needs of their communities and adapted to changes in federal policy in meeting that commitment. As the nation strives to reduce its carbon emissions, policymakers must balance realism with aspiration, recognizing that any energy transition will require adequate time and technology, and must be inclusive of all energy sources to maintain the reliability and affordability that is the cornerstone of American energy security.

NRECA represents the interests of the nation's nearly 900 rural electric utilities. Our members are responsible for keeping the lights on for more than 42 million people across 48 states and 56% of the nation's landmass. Electric cooperatives power communities and empower their residents to improve their quality of life. Affordable electricity is the lifeblood of America's economy. Because of their critical role in providing affordable, reliable, and universally accessible electric service, electric cooperatives are vital to the economic health of the communities they serve.

America's electric cooperatives serve all or parts of 83% of the nation's counties and 13% of the nation's electric customers, while accounting for approximately 12% of all electricity sold in the United States. NRECA's member cooperatives include 63 generation and transmission (G&T) cooperatives and 832 distribution cooperatives and other rural utilities. The G&Ts are owned by the distribution cooperatives they serve. The G&Ts generate and transmit power to nearly 80% of the distribution cooperatives, which in turn provide power directly to the end-of-the-line

consumer-members. Remaining distribution cooperatives receive power directly from other generation sources within the electric utility sector. NRECA members account for about 5% of national generation. On net, they generate approximately 40% of the electric energy they sell annually and purchase the balance from non-NRECA members. All electric cooperatives are incorporated as private entities in the states in which they reside. All but two of NRECA's member cooperatives are "small entities" under the Regulatory Flexibility Act, 5 U.S.C. §§ 601-12, as amended by the Small Business Regulatory Enforcement Fairness Act. Importantly, distribution and G&T cooperatives share responsibility for serving their members by providing safe, reliable, and affordable electric service.

The nation's electric grid reliability depends on reliable sources of base load and intermediate load generation. Renewable energy cannot fulfill this need. This fact, combined with the increasing electrification of other sectors of the economy, which is anticipated to require a three-fold expansion of the transmission grid and up to 170% more electricity supply by 2050, according to the National Academies of Sciences.¹ This increased electrification will place more demands on the electric grid and require measures to enhance grid reliability. We are concerned that this proposal along with a series of other rulemakings EPA is undertaking will significantly affect fossil-fuel electric generation without considering cost and ultimately electric reliability. This EGU RTR proposal would require coal-fired EGUs to spend billions of dollars in capital and operating costs, resulting in barely identifiable health benefits. The existing health risks associated with this EGU source category are well below the agency's "acceptable risk thresholds." Because no EGU coal-fired generation is being built and some existing ones are approaching the end of their remaining useful life, EGU low risk levels will remain and likely will be reduced without any additional EGU RTR regulations whatsoever.

Comments on This Rulemaking

NRECA is a member of the Power Generators Air Coalition (PGen), and we support its comments on this rulemaking. In view of the Coalition's comments and in consideration of the two technical support documents cited in Coalition comments and attached to these comments,

¹ National Academies of Sciences, Engineering, and Medicine. 2021. *Accelerating Decarbonization of the U.S. Energy System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25932>.

the Cichanowicz Report and Roberson Memo², this EGU RTR proposal should be withdrawn and reconsidered for the following reasons.

- *The proposed mercury (Hg) standard of 1.2 lb./TBtu for EGUs using lignite coal is technically unachievable and must be reconsidered.*

The proposal makes numerous critical mistakes in assuming lignite fired EGUs can achieve a 1.2 Hg limit with 90% Hg removal. As detailed in the Cichanowicz Report, Section 6, EPA assumes the characteristics of lignite and subbituminous coals are similar such that the Hg removal by emission controls capabilities is similar. In this light EPA does not consider that the high presence of sulfur trioxide (SO₃) in lignite coal combustion flue gas that significantly limits the Hg emissions reduction potential of emissions controls. If EPA would have read a report³ issued to EPA by its own consultant, Sargent & Lundy, we'd like to think EPA would have never proposed the 1.2 lb./TBtu standard. Also, EPA mischaracterizes the Hg content variability in lignite coals and because of this high variability that EPA has failed to recognize and consider, EGUs would have to achieve a 95% Hg reduction level to meet the proposed Hg standard. This reduction level that has not been demonstrated to be achievable.

- *The proposed filterable particulate matter (fPM) of 0.010 lbs./MMBtu must be reconsidered. It is based on an inadequate and arbitrary limited consideration of available quarterly stack data, and failure to consider an EPA recognized 20-30% compliance margin that when taken into necessary account results in the proposal significantly underestimating the proposal's feasibility and cost of compliance.*

As EPA verifies in this proposed rule, the earlier 2020 review of health and environmental risks for this EGU source category are well within the risk thresholds established for other source

² Cichanowicz, et al., Technical Emissions Standards for Hazardous Air Pollution: Coal and Oil-fired Electric Utility Steam Generating Units Review of Residual Risk and Technology Review and Roberson, Technical Comments on EPA's Proposed Mercury and Air Toxics Standards and technology review-PM CEMS. (This document is submitted with these comments.)

³ IPM Model – Updates to Cost and Performance for APC Technologies: Mercury Control Cost Development Methodology, prepared by Sargent & Lundy, Project 12847-002, March 2013. (This document is submitted with these comments.)

category Section 112 hazardous air emissions reviews. Based on this 2020 review EPA should have concluded that no further risk or technology review is needed.

EPA's makes a fatal critical error in the analysis to justify the proposed fPM limit. The analysis fails to consider a necessary design/compliance margin in the range of 20 to 30% when evaluating the cost and the capabilities of emission control technologies. As EPA itself acknowledges in an EPA Office of Air and Radiation Memo,⁴ according to control technology providers a design margin is necessary to ensure the ability to comply with the emissions limit. With the proposed fPM limit of 0.010, appropriate design margin necessitates that control technologies must be able to achieve a limit of at least 0.08 or lower. EPA fails to take design margin into consideration in its cost analysis.

Further, as detailed in the Cichanowicz Report and as explained in the PGen comments, EPA's cost estimates for fPM removal as well as for non-Hg metal HAPS removal are underestimated by approximately 50%. EPA's cost estimates must be revised to establish a legitimate and non-arbitrary cost range. When appropriately adjusted the prospective compliance costs are well above what EPA has considered cost-effective in many past source category RTR action. For these reasons EPA should reconsider the fPM proposal.

- *The proposed required Continuous Emissions Monitoring Systems (CEMS) as the only method to demonstrate the proposed fPM limit is technically unworkable and significantly more expensive than stack testing.*

As the Roberson Memo⁵ describes in detail, the proposed CEMS requirement as the compliance method is flawed for many reasons. As a highly qualified expert, Roberson points out that the

⁴Hutson, N., National Emission Standards for Hazardous Air Pollutants (NESHAP) Analysis of Control Technology Needs for Revised Proposed Emission Standards for New Source Coal-fired Electric Utility Steam Generating Units, Memo to Docket No. EPA-HQ-OAR—2009-0234, November 16, 2012. at 1 (discussing mercury); 2 (discussing PM). (This document is submitted with these comments)

⁵ Ralph L. Roberson, Memorandum, "Technical Comments on EPA's Proposed Rule: Mercury and Air Toxics Standards Risks and Technology Review – PM CEMS," June 16, 2023. (This document is submitted with these comments.)

correlation requirements are next to impossible to achieve for the proposed fPM limit of 0.010lbs./MMBtu and even more unworkable with the alternative 0.006 lbs./MMBtu proposal.

The EPA cites earlier rulemakings and research projects that in fact reasonably lead to the opposite of EPA's conclusion of CEMS viability to accurately measure fPM at 0.010 lbs./MMBtu. EPA maintains that the 2012 Portland Cement rulemaking bolsters EPA's contention that CEMS can operate with required accuracy and precision within the proposed fPM range EPA proposes. Roberson, however, points out that in the final Portland Cement rule EPA decided not to require CEMS because of correlation issues. EPA next claims the CEMS requirement for new EGUs validates the proposed requirement here. But again, as Roberson point out since there are no new EGUs, there is no actual required use to validate the CEMS workability for the fPM levels at issue here. Lastly, EPA references an Electric Power Research Institute (EPRI) project whose objective was to perfect a CEMS that would directly measure PM. EPA cites the EPRI effort to somehow show this technology was developed and would allow accurate measurement of fPM at the level proposed here. Roberson, who participated in this earlier effort, recounts that the research effort was terminated without success at least partially because EPA showed no interest in furthering the effort to perfect CEMS.

- *EPA has failed to consider the electric reliability impacts of this rulemaking*

As detailed in the Cichanowicz Report, EPA IPM model base case for this proposal prematurely retired 59 coal-fired units. Many of these units have not, as of the time of this rulemaking, indicated retirement dates near the date when this proposal may become final. Thus, if EPA prediction is wrong, they would be affected by the date this proposal would become final.⁶ EPA modeling principally relies on the Inflation Reduction Act associated financial incentives along with the implementation of the 2015 Ozone Transport Federal Implementation Plan (FIP) as the main drivers forcing the retirements of most of the 59 units. EPA's specific modeling assumptions leading to these units prematurely retiring do not appear anywhere in the docket and yet EPA's Regulatory Impact Analysis (RIA) for this proposal incorporates these assumptions to

⁶ Cichanowicz Report at pages 40-43. Table 8-1 listing units retiring in 2030 should read 27 not 23 making the total in Table 8-1 59 units. Tables 8-2 and 8-3 are correct in listing EPA IPM retired units.

conclude this proposal would only result in 500MW coal capacity retirement.⁷ At the very least EPA should have modeled an alternative scenario incorporating less presumptive assumptions regarding unit retirements and considered that alternative scenario in the RIA and when determining the costs associated with the proposal assume unit retrofits to comply with the proposal.

In addition, EPA did not consider the reliability impacts of the proposal's required emission control upgrades and additions to units. It is likely that many units that would have to incur millions of dollars to retrofit emissions controls to comply with this proposal would not do so. We encourage EPA to be concerned with grid reliability and consider the impacts of this proposal on it using reasonable retrofit costs as detailed in Section 5 of the Cichanowicz Report.

⁷ Regulatory Impact Analysis at Section 5.3.3 page 5-13