The National Rural Electric
Cooperative Association

Comments on

National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units.

Submitted Electronically to:

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Conclusions

Regulation under Section 112 is not appropriate or necessary

I. The Section 112(c) source listing of EGUs is arbitrary and capricious and not in accordance with CAA Section 307 provisions that require notice and comment rulemaking and a rational decision to list based on the record.

II. EPA has not met the Section 112(n)(1)(A) necessary and appropriate requisites to listing EGUs under Section 112(c).

III. Regulatory programs apart from Section 112 make regulating EGU emissions as hazardous not appropriate or necessary.

Section 112 regulation

IV. EPA must extend the compliance period beyond the proposed three years in the interest of technology availability, time needed for the installation of controls, and national security.

V. The proposed MACT standards for existing units are not on average achieved by the best performing 12 percent of existing sources as required by the statute. EPA's "Franken" MACT approach is not legal or appropriate. EPA must subcategorize the EGU fleet to promulgate MACT standards achieved on average by the top 12 percent of the existing sources.

VI. EPA's proposed methodology for establishing the Hg MACT for exiting units is flawed and otherwise not in accordance with the statutory requirements.

VII. The "beyond the floor" mercury MACT for EGUs designed for coal below 8300 Btu/lb is improper and not in accordance with the statutory requirements.

VIII. MACT standards should not apply during startup, shutdown, or malfunction, and the affirmative defenses for malfunction should be reasonable and requirements well articulated

IX. The variability method utilized in the MACT floors to ensure the limits can be met during every day unit operating conditions is flawed.

X. EPA should develop a Section 112(d)(4) health-based standard for HCl.

XI. Aspects of the work practice standards for dioxins, furans, and organic HAPs are unrealistic and need to be revamped.

XII. A PM filterable MACT limit should be used instead of a PM total metric.

XIII. EPA needs to subcategorize for purposes of issuing realistic new unit MACT standards.

XIV. EPA should propose percent reduction alternatives to the numerical MACT limits.

XV. EPA should adjust the definition of units excluded from this rulemaking to include limited oil use based on the unit Btu annual designed rate.

Monitoring and Compliance

XVI. Hg MACT compliance should be based on an annual average due to fuel Hg variability and no potential short term environmental or health impacts.

XVII. Operating limits or parameters should not be required on emission control devices where compliance is demonstrational by CEMs, and operating limits should not be established based on initial performance testing.

XVIII. The plant wide averaging proposal should be broadened to all HAP affected sources at the plant site regardless of category or subcategory without an averaging discount penalty.

Introduction

The National Rural Electric Cooperative Association (NRECA) appreciates the opportunity to comment on the Environmental Protection Agency's (EPA's) May 3, 2011, proposal for National Emission Standards for Hazardous Air Pollutants for Coal- and Oil-Fired Steam Generating Units (HAPs) and New Source Performance Standards (NSPS) for Fossil-Fuel-Fired Electric Utility Units.[1] The proposals are directed at coal- and oil- fired electric utility steam generating

[1] 76 Fed. Reg. 24976 (May 3, 2011). [Herein after referred to as the proposed HAPS and NSPS rules].

units (here in after referred to as EGUs). NRECA's NSPS comments are filed concurrently in the appropriate docket.

NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide electric service to approximately 42 million consumers in 47 states or 13 percent of the nation's population. All or portions of 2,500 of the nation's 3,128 counties are served by rural electric cooperatives. Collectively, cooperative service areas cover 75 percent of the U.S. landmass.

Sixty-five rural electric generating and transmission cooperatives (G&Ts) generate and transmit power to 668 of the 841 distribution cooperatives. The G&Ts are owned by the distribution cooperatives they serve. The remaining distribution cooperatives receive power directly from other generation sources within the electric utility sector. A very significant portion of the power purchased directly by distribution cooperatives originates from coal-fired generation.

Overall, the G&Ts provide 41 percent of all distribution cooperative electric generation needs. Eighty percent of this generation or 26,000 megawatts (MWs) is coal fired. Fifty percent of this coal-fired generation was constructed under Clean Air Act (CAA) new source regulatory mandates and more than 60 percent is equipped with flue gas desulphurization (FGD) units or "scrubbers" to control sulfur dioxide (SO_2) emissions. More than 6,000 MWs of this generating capacity is also retrofitted with state-of-the-art nitrogen oxides (NOx) controls, Selective Catalytic Reduction (SCRs), and almost all cooperative coal-fired generation is equipped with low NOx burner technologies. In the aggregate, cooperative coal-fired generation is newer and equipped with more pollution controls as compared to the overall electric utility sector.

A very significant portion of cooperative EGUs will be forced to retrofit with additional emission controls under the HAPs proposal in order to continue to provide electric power. Additionally, some cooperative-owned units will be forced to shut down as they will be likely unable to either equip with additional controls under the HAP timelines or cost-effectively justify the anticipated

emission control retrofits. In short, our member cooperatives have great concerns with the practical implications of this rulemaking, as well as the procedures EPA incorporated into this rulemaking process.

The proposal itself is complex and requires analyzing many underlying documents directed at Maximum Available Control Technology (MACT) standards, individual HAPs health effects, monitoring and compliance obligations, and work practice standards (WPS). In many cases, it is almost impossible to ascertain how the agency arrived at many of the regulatory conclusions proposed in this rulemaking. In view of the complexity and confusion associated with this rulemaking and information or lack thereof contained in the docket, the ninety-day comment period was simply not adequate time to allow complete and intelligent comment on this proposal.

Furthermore, NRECA is extremely disappointed with the process EPA employed as an attempt to meet its obligations under the Small Business Regulatory Enforcement Fairness Act (SBREFA).[2] At the onset, the SBERFA process in connection with this rulemaking was severely truncated in an obvious violation of the agency's own procedures for ensuring a regulatory proposal's burdens on small entities are minimized. As information in the rulemaking docket reveals, Small Entity Representatives (SERs) were not provided with descriptions of significant regulatory alternatives to the proposed rule, or options for differing timetables or for simplifications of compliance and reporting requirements. Moreover, participants were given only 14 days to prepare and submit written comments, among other shortcomings with the process. According to the Report of the Small Business Advocacy Review (SBAR) Panel "SERs stated that they do not believe they were provided the opportunity for effective participation in the Federal regulatory process as required by SBREFA."[3] At the hastily convened meeting, no

[2] 5 U.S.C. § 601, et.seq

[3] Report of the Small Business Advocacy Review Panel, EPA-HQ-OAR-2009-0234 Docket ID # 2921, p 14.

regulatory options were provided and no follow-up meeting was scheduled. In fact, EPA was the only entity represented on the SBAR panel that believed the process presented an adequate opportunity for small entity input as required by SBERFA.

In view of the short time period provided to respond to this exceedingly complex rulemaking, the lack of complete and accurate information explaining the proposal included in the docket from the onset of the proposal's publication, and the agency's abuse of its own procedures for garnering small entity input, NRECA hopes EPA will, at the very least, appropriately consider supplemental comments filed after the comment period expires.

Comments

I. The Section 112(c) source listing of EGUs is arbitrary and capricious and not in accordance with CAA Section 307 provisions that require notice and comment rulemaking and a rational decision to list based on the record.

On December 20, 2000, EPA issued a final rule that EGU HAPs regulation under the CAA Section 112(c) was "appropriate and necessary."[4] The appropriate and necessary finding was requisite under Section 112(n)(1)(A) before a listing for HAPs regulation could occur under Section 112(c) and subsequent regulation in accordance with Section 112(d).

Aside from promulgating the December 2000 rule as final providing absolutely no opportunity for interested parties to comment on a rule having immense implications on the utility industry from at least cost and reliability standpoints, EPA presented no rational justification for its decision that it was appropriate and necessary to regulate EGU emissions as hazardous. The rule addressed three categories of EGU HAPs regarding their risks to the public health and the environment. Addressing non-mercury metal HAPs, EPA found that although cancer risks are not high, they are not low enough to be eliminated as a potential public health concern.

[4] 65 Fed. Reg. 79,825 (December 20, 2000).

Regarding dioxins, hydrogen chloride (HCl), and hydrogen fluoride (HF), the agency found them to be of "potential concern." Lastly, EPA found a "plausible link" between anthropogenic mercury (from EGU and all other manmade emissions) and methylmercury in fish, thus concluding that EGU mercury emissions are considered a threat to public health.[5] "Potential concerns" and "plausible links" between emissions and health concerns are not adequate reasons to appropriately and necessarily list and regulate EGU emissions under Section 112(c) and (d) respectively. EPA's actions here were arbitrary and capricious.

On March 29, 2005, EPA promulgated another rule addressing its earlier December 2000 regulation 112(c) EGU listing decision that reached an opposite conclusion as to whether it is appropriate and necessary to list and regulate EGU emissions under Section 112.[6] Relying on a number of factors including the lack of health effects of EGU HAPs and the impact of other CAA programs to further reduce these emissions in a more cost-effective manner, EPA concluded that EGU regulation under Section 112(n)(1)(A) was neither necessary nor appropriate and effectively delisted EGUs as a Section 112(c) source .[7]

Litigation ensued addressing whether EPA could delist under Section 112(c) in the manner in which it did. The court in *New Jersey v. EPA* ruled that EPA did not follow delisting procedures as mandated under Section 112(c)(9) and that a Section 112(c) listing is not challengeable in accordance with Section 112(e)(4) until HAP emission standards are issued.[8] The present May 3, 2011, proposal essentially reiterates EPA's 2000 Section 112(c) listing and couples it with

[5] Id. at 97,827

[6] 70 Fed. Reg. 15,994 (March 29, 2005).

[7] Id.

[8] *New Jersey v. EPA* 517 F. 3d 574 (D.C. Cir.2008).

proposed EGU section 112(d) emission standards, and thus under Section 112(e)(4) the Section 112(c) listing decision is ripe for review.

The initial EGU Section 112(c) listing decision in the December 2000 final rule is arbitrary and capricious under CAA Section 307, and thus it must fail. Interested parties had absolutely no opportunity to comment on at least three major and critical issues posed in the December 2000 final rulemaking. First, whether EPA's interpretation of section 112(n)(1)(A) regarding the specific requirements of the mandatory study provisions was correct or at least not arbitrary. Second, whether EPA's scientific conclusions of the hazards associated with EGU HAPs was correct or at least not arbitrary. And third, whether EPA's interpretation of "necessary and appropriate" requisite under Section 112(n)(1)(A) to regulating EGU HAPs under Section 112 was correct or at least not arbitrary. Had EPA proposed a rule allowing for comment on these and other important issues, its decision to list EGUs under Section 112(c) based on a complete record that included comments addressing critical issues would not ever have been rationally made.

II. EPA has not meet the Section 112(n)(1)(A) necessary and appropriate requisites to listing EGUs under Section 112(c).

Citing the *New Jersey* decision, EPA's contends that it has properly listed EGUs under Section 112(c) and that EGU HAP emissions do not meet requirements of Section 112(c)(9) for delisting.[9] EPA misreads the court's decision. In fact, the *New Jersey* court never ruled on the appropriateness of EPA listing including whether it met the procedural and substantive requirements under Section 307.[10] Now, EPA must show that it is appropriate and necessary to regulate EGU emissions following the requirements in Section 112(n)(1)(A). EPA has heretofore never adequately explained its interpretation of appropriate and necessary in the

[9] 76 Fed. Reg. at 24,998

[10] *New Jersey v. EPA* at 581, Footnote 3.

context of Section 112(n)(1)(A) and listing under Section 112(c), unless it is contending that a mere "plausible link" between all manmade mercury emissions and methylmercury in fish makes it appropriate and necessary to regulate EGU emissions under Section 112.

EPA's re-interpretation of Section 112(n)(1)(A) in this proposal is almost completely opposite its interpretation in the 2005 final rule, and this reinterpretation would render that subparagraph a meaningless addition to Section 112. Throughout this 2011 proposal, EPA repeatedly takes the position that no language in Section 112(n)(1)(A) prevents it from interpreting the subparagraph in the manner that nullifies any special meaning to the appropriate and necessary requisites to Section 112 EGU HAPs regulation.[11] It is clear that Section 112(n) was added to address EGU emissions is a unique manner as compared to the other provisions of Section 112. No other language in Section 112 references the regulation of a source category of emissions if "appropriate and necessary." As EPA pointed out in its 2005 rule, its 2000 listing decision did not provide an interpretation of appropriate but instead focused on "facts and circumstances" of EGU emissions themselves.[12] This 2011 proposal, then, is EPA's first attempt to explain how EPA finds it appropriate and necessary to regulate EGU emissions under Section 112. There are numerous flaws in this attempt.

EPA has sought to lump all HAP emissions from sources in addition to EGU emissions when determining whether it is appropriate and necessary to regulate EGU emissions.[13] Section 112(n)(1)(A), however, specifically references hazardous of utility emissions, not all emissions as EPA does here. In the 2005 final rule, EPA assessed the health effects of EGU mercury

[11] 76 Fed. Reg. at 24,988-24,992

[12] 70 Fed. Reg. at 16,000

[13] 76 Fed. Reg. at 24,989

emissions and found no appreciable health risk.[14] For this 2011 proposal, EPA evaluates health risk based on total worldwide mercury inventory. Evaluating individual source category emissions under the all worldwide emissions approach, however, means that all sources of any particular HAP no matter how small the relative contribution are subject to Section 112 regulation in EPA's view. This position is logically not sustainable.

Additionally, EPA includes environmental effects in addition to health hazards in its determination, even though Section 112(n)(1)(A) "necessary and appropriate" requirement is directed exclusively at EGU emission health hazards.[15]

Also, EPA construes "the requirements of the act" to mean only acid rain control when evaluating effects of other Clean Air Act program EGU emission reductions on EGU HAP emissions.[16] The language here is clear and unambiguous: "requirements of the act" cannot be read to include only acid rain control.

The 2000 decision only found "plausible links" of health effects of all manmade sources of mercury, and "potential concerns" of health effects of certain metal emissions, dioxins, and acid based aerosols.[17] Even assuming there validity in these findings, none of these findings individually or in combination is adequate justification to regulate EGU emissions under Section 112.

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[14] Id. at 25,019

[15] Id.

[16] Id.

[17] 65 Fed. Reg. at 79, 827

Perhaps realizing as much, EPA includes a new analysis in this proposal meant to confirm that is appropriate and necessary to regulate EGU HAP emissions under Section 112.[18] EPA evaluates essentially three categories of HAPs, acid gases, non-mercury HAPs, and mercury as part of its new analysis. None of these evaluations demonstrate that EGU regulation under Section 112 is necessary and appropriate.

For acid gases, especially HCl and HF, EPA identified no study or rational basis to demonstrate concrete health concerns associated with these types of emissions.[19] The fact that the EPA Administrator "remains concerned"[20] about potential effects of these acid gases falls far short of any reasonable appropriate and necessary basis to regulate them under Section 112.

For non-mercury HAPs, EPA produced one study on chronic inhalation risk assessment that identified three sites with cancer risks greater that one in one million for hexavalent chromium.[21] The study was authored by EPA staff, has not been peer reviewed, and raised numerous critical issues fundamental to its validity. For example, surrogate speciated chromium emissions data were used at the study sites instead of actual emissions information, emissions factors were derived where site unit data was unavailable, in some cases the units were assumed to run 100 percent of the time which is impossible, dispersion modeling was used that is biased toward over predicting downwind impacts, and estimated ambient concentrations were utilized as substitutes for real exposure concentrations for all people within a census block. In short, the study was nothing more than a rough synthetic attempt at ascertaining actual individual risk information.

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[18] 76 Fed. Reg. at 24,999

[19] Id. at 25,016

[20] Id.

[21] Strum, et al, Non-Hg Case Study Chronic Inhalation Risk Assessment for the Utility MACT "Appropriate and Necessary" Analysis. Docket EPA_GQ-OAR-2009-0234-2916.

Its conclusions appear inconsistent with other research efforts and are highly suspect, especially considering the study's shortfalls as cited above. Even taken as accurate representation, its results hardly demonstrate that it is necessary and appropriate to regulate coal-fired EGU HAPs under Section 112 because three sites nationwide show risks greater than one in one million with the highest at eight in one million. Since EGUs were improperly listed under Section 112(c), the standard for regulating them is not delisting criteria under Section 112(c)(9), instead its whether Section 112(n)(1)(A) mandates a different standard be applied; it does as pointed out in other areas of these comments.

For mercury (Hg), EPA states that the 2000 rule determining that it was appropriate and necessary to regulate EGUs was supported by the record. That rule however in view of the record and studies required under Section 112(n)(1) found only a "plausible link" between anthropogenic sources of mercury and methylmercury in fish according to EPA as stated in the 2000 rule preamble.[22] We again state that finding only a "plausible link" does not clear the appropriate and necessary hurdle necessary to regulate EGUs under Section 112 as EPA maintains in this 2011 proposal.

For new analysis in this proposal, EPA uses a mercury reference dose (RFD) that remains unchanged over the last decade. It is four times more stringent than that chosen by the U.S. Food and Drug Administration (FDA), three times more stringent than that chosen by the Agency for Substances and Disease Registry (ATSDR), and 2.3 times more stringent than that chosen by the World Health Organization.

The additional mercury background information in this docket leads away from finding EGU Section 112 regulation is appropriate and necessary. The proposal emphasizes global emissions of mercury and overall atmospheric deposition of mercury as critical factors for mercury concentrations in fish, but EPA's proposed EGU Hg MACT would only reduce U.S. levels

[22] 65 Fed. Reg. at 79,527

atmospheric by 1/1000. The national-scale assessment model EPA used to demonstrate mercury benefits of its proposal, Mercury Maps (MMaps), is according to EPA the only one available.[23] We add it is a model with many deficiencies. It is a static model unable account for the dynamics of ecosystems that affect mercury bioaccumulation in fish, cannot consider non-air mercury inputs to watersheds, and assumes reductions in airborne mercury lead to proportional reductions fish mercury concentrations.[24] Even with this heavily weighted bias of overly stringent RFD and a national model, EPA can only show a fraction of an IQ point gain for the most exposed individuals, with the average effected individuals as prenatal children, 244,000 annually, experiencing only a 2/1000 IQ point gain.[25] Considering the extremely conservative Mercury RFD EPA has chosen and the numerous assumptions and shortfalls in its modeling technique, it is quite possible that no identifiable health benefits would accrue with the imposition of this proposal's mercury MACT. EPA itself recognizes the many uncertainties associated with its mercury analysis and believes its entire health assessment of mercury needs to be peered reviewed.[26]

III. Regulatory programs apart from Section 112 make regulating EGU emissions as hazardous not appropriate or necessary.

The deficiencies in EPA's premise that EGU regulation under Section 112(c) and (d) is necessary and appropriate is most telling in the associated benefits analysis that shows almost all the benefits of this proposal would be derived from particulate matter 2.5 ($PM_{2.5}$) precursor reductions.[27] $PM_{2.5}$ emissions control is EPA's surrogate for metal HAPs emission control. EPA

[23] RIA, 5-36 to 5-37

[24] Id.

[25] Id. at 5-2, 5-78

[26] 76 Fed. Reg. at 25,012

[27] Id. at 25,077

seems to believe that regulating EGU emissions under Section 112(c) and (d) is justified because existing emissions control technologies such as FGD, SCR, Fabric Filters, and electrostatic precipitators (ESP) and wet ESP are all demonstrated technologies for controlling $PM_{2.5}$ emissions, acid gases, and in many cases mercury. But this is precisely a reason not to regulate under Section 112. There are numerous other existing programs under which EGU emissions are already under a regulatory regime to control these emissions. EPA's rationalization that Section 112 regulation is needed because there is no guarantee that EGU existing and forecast reductions of these emissions under these other programs will continue is unfounded. [28] These other programs include the Acid Rain Control, Clean Air Transport Rule (in 2012, the Cross-State Air Pollution Rule-CSAPR) and likely supplementals in response to new $PM_{2.5}$ and ozone (O_3) national ambient air quality standards (NAAQS), Regional Haze and Visibility, and updated state implementation plans (SIPs) in response to new NAAQS. While other industrial sectors may share additional burdens in response to these programs additional mandates, EPA knows full well that EGU emissions of relevant pollutants will have to be reduced significantly in the future to meet these program objectives.

The *New Jersey* court decision vacated the Clean Air Mercury Rule (CAMR) on procedural grounds. The continued application of existing Clean Air Act programs as delineated above with the addition of a Section 111[29] program aimed at mercury emissions would meet the requirements of the Act in a more cost effective manner while guaranteeing health and environmental benefits substantially similar to that likely achieved under this proposal.

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[28] Id. at 25,917

[29] While NRECA would support a Section 111 mercury trading program similar to that contained in the previous Clean Air Mercury Rule (CAMR), we would reserve judgment on an overall emissions cap based on questions of legality and appropriateness.

IV. EPA must extend the compliance period beyond the proposed three years in the interest of technology availability, the time needed for installation of controls, and national security.

The proposal would require an enormous amount of emissions control equipment be installed within three years.[30] In fact, it appears that well over 50 percent of all EGUs will be expected to retrofit with at least one major pollution control device.[31] EPA's assertion that these retrofits can be accomplished within 36 months is without any concrete justification. The preamble has offered nothing but supposition that a three or even a four year compliance timeline can be met. In fact, comments included in interagency review under EO 12886 in connection with this rulemaking describe in detail the problems encountered with meeting requirements with the Clean Air Interstate Rule (CAIR) retrofit mandates including overcoming New Source Review (NSR) in a timely manner. The time mandate under the proposed EGU HAPs is far more compressed than that under CAIR. EPA's assumption here that the proposed timeline is adequate is inapposite of recent history of EGU retrofits, unrealistic, and not supported by any factual data.[32] EPA proposal that the states be allowed to extend the three year timeline by one year in accordance to Section 112(i)(3)(B) to allow for staggering of installations and to ensure reliable power is not enough.[33]

Even under ideal conditions, EPA has little basis to assume the amount of pollution control devices can be installed in even four years as would be required for the entire utility industry.

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[30] 76 Fed. Reg. at 25,102. See proposed §63.9984

[31] See RIA at 8-14.

[32] 76 Fed. Reg. at 25,034, EPA is relying significantly, perhaps even exclusively, on a letter from an emissions control vendor organization to Senator Carper that such retrofits can be accomplished in 36 months.

[33] 76. Fed Reg. at 25,055

This is especially true for cooperatives and other small entities that typically have just one or several units that comprise significant portions of their baseload generation. When these units are taken off-line, substitute baseload generation must be purchased at an uncertain price. Some small systems needing to retrofit one of two units would need to schedule outages to ensure that substitute baseload power is available at all. Small systems must compete with larger ones for engineering expertise and equipment venders that would prefer dealing with larger clients that offer multiple projects with smaller administrative overhead on a dollar revenue basis. In these cases, small systems are simply put at the back of the line. In some cases, financing is not as readily available to smaller systems or takes longer to acquire.

Also, EPA fails to address time impediments due to the necessity to undergo New Source Review (NSR) and permitting requirements for the installation of pollution control devices anywhere in the proposal. As EPA is well aware, the NSR process can take over a year and with the sheer number of installations anticipated here, it is likely that the NSR process will be heavily backlogged at many state permitting agencies. To summarize, contrary to EPA's presumption, even four years may not allow adequate time for staggered installations of equipment to ensure reliability or avoid significant cost increases to the electric consumer due to participation in the wholesale markets for baseload power.[34]

The final rule must incorporate measures to expand the compliance timeline from three to a firm six years. Utilities must know ahead of time how much time in available so as to effectuate a rational and comprehensive timeline to install the necessary retrofits. To accomplish this, EPA needs to make clear that in accordance to Section 112((i)(3)(B) the base three year timeline is absolutely extended an additional one year. Leaving the possible addition of one year up to individual states is not adequate for long term planning.

[34] Id.

Additionally, the Section 112(i)(4) Presidential exemption allowing compliance time extensions in two year increments should be utilized to provide an additional two years to make the overall compliance timeline six years at least for some units. NRECA believes the two prerequisites necessary to implement the Presidential exemption are present in connection with this rulemaking. First, the technology is not available to be installed on all units requiring retrofits under this proposal. Second, electric reliability would be at a stake and that would be a matter of national security. This provision could be implemented such that units unable to meet the four year timeline could acquire a two year extension. Quite possibly, a few units may need even more than six years. In these cases, Section 112(i)(4) could provide additional time with appropriate demonstrations of need.

V. The proposed MACT standards for existing units are not on average achieved by the best performing 12 percent of existing sources as required by the statute. EPA's "Franken" MACT approach is not legal or appropriate. EPA must subcategorize the EGU fleet to promulgate MACT standards achieved on average by the top 12 percent of the existing sources.

Under the so called "Franken" MACT approach, EPA has aggregated all coal–fired EGUs for purposes of determining MACT standards for existing units for all HAP emissions except mercury.[35] As a result, the top performing units for each HAP are different. The statute requires that the MACT emission levels represent the average emission limitation achieved for the best performing 12 percent of sources.[36] While it is possible that a few select units out of the existing 1091 sources in the category can meet all the proposed MACT standards, there is not a single group that that comprises the average of the top performing 12 percent for each MACT. EPA must re-propose the proposed MACT standards without incorporating the "Franken" MACT approach and in accordance with the other statutory requirements.

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[35] 75 Fed. Reg. at 25,045

[36] Id.

In addition to the proposed lignite coal subcategory for proposed Hg MACT, at a minimum, additional subcategories should include Fluidized Bed Combustion (FBC) units, small units 125 MW or less, limited use or load following units.

As a general matter, EPA claims to have examined closely the collected data and found no adequate justification for further subcatorization.[37] As EPA knows, the underlying data used to construct the proposed MACT limits is as the proposal puts it, the only "available."[38] In other words, if a more complete set of data were available, EPA may have arrived at the conclusion that more subcategorization was appropriate. EPA does know that different combustion designs and different unit demands and operations yield different emission characteristics depending on those designs and operational factors. EPA's statement that an examination of the available data shows no need for further subcategorization misses two important points.[39] First, was the data available to discern the difference emission characteristics? And second, just because units of different designs (and presumably different operational conditions) are on the list of best performing units does not mean that all units of similar design or operation will perform the same. As pointed out above, units of different design and operation do have different emission characteristics. Section 112(d)(1) is clear that EPA has the discretion to subcategorize based on classes, types, and designs of sources. EPA needs to use this authority here.

FBC units are of significantly different design as compared to pulverized coal (PC) unit configuration to justify a separate Hg subcategory. NRECA believes a closer look at the available data by EPA would lead to this conclusion.

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[37] Id at 25,037

[38] Id.

[39] Id.

Limited use units are by definition not baseload units and are typically dispatched during very high loads on the system or follow renewable resource output, such as with wind generation. Because these types of units can ramp up and down frequently, they likely have different emission characteristics and should be in a separate subcategory. NRECA suggests EGUs with an average annual capacity factor of 30 percent or less be identified as a subcategory.

Regarding small units of 125 MW or less, NRECA believes the data collected in connection with this rulemaking show differences in HAPs performance as compared to the floor averages proposed for many of the MACTs. The MACT floor levels would in some cases be notably higher (less stringent) than conventionally sized EGUs. It is appropriate to develop a subcategory for units less that 125 MW based on the existing data.

VI. EPA's proposed methodology for establishing the Hg MACT for exiting units is flawed and otherwise not in accordance with the statutory requirements.

Section 112(d) is clear. Existing MACT limits are to be determined based on the top performing 12 percent of sources in the category. For Hg, however, EPA used only 40 units and not 130, representing the 12 percent of the source category.[40] If EPA lacked the necessary data to evaluate the top 12 percent of performing units, it should not have proposed this rule. Just as importantly, EPA's failure to follow the law leads to the development of an Hg MACT that is almost certainly more stringent than the statute allows, particularly when coupled with the troublesome methodology to determine emissions variability as discussed later in these comments. EPA must follow the law and propose a MACT standard utilizing the top performing 12 percent of units in the coal-fired EGU category.

VII. The "beyond the floor" mercury MACT for EGUs designed for coal below 8300 Btu/lb is improper and not in accordance with the statutory requirements.

[40] Id. at 25,045

The proposed Hg MACT for this coal rank establishes a floor level of 11.0 lb/Tbtu and a beyond the floor limit of 4.0 lb/Tbtu. EPA's basis for proposing the beyond the floor limit is that it "believes" the same technology, activated carbon injection (ACI), installed on units in this subcategory "could" achieve the beyond the floor standard.[41] EPA's suppositions and beliefs cannot serve as a rational basis for determining MACT beyond the floor limits. The statutory requirements are clear. The MACT standards must be achieved in practice, and thus the proper limit for this subcategory is 11.0 lb/Tbtu.

VIII. MACT standards should not apply during startup shutdown or malfunction, and the affirmative defenses for malfunction should be reasonable and requirements well articulated.

EPA proposes that the MACT limits apply during startups and shutdowns but not during malfunctions if the regulated successfully articulate an "affirmative" defense that the malfunction was sudden, infrequent, and unavoidable. We agree with EPA that under court decisions that the HAPs regulation must account for startups and shutdowns events. We note, however, that in previous HAP rulemakings these events were accounted for by incorporating work practice standards and not by incorporating these events into emissions averaging times for compliance purposes. The proposed MACT standards are extremely stringent, and thus it is quite possible that more than one outage during the averaging time could render a unit in noncompliance.

We believe incorporating work practice standards and applying them during startup and shutdown events is the prudent approach here. While these types of standards can be devised to ensure reasonable measures are taken to minimize emissions during these events, applying the MACT limits would do little but unnecessarily place the source in risk of noncompliance.

[41] Id.

The proposal also includes an affirmative defense provision as a defense to civil penalties for emissions exceedances caused by malfunction. We support this concept but implore the agency to articulate specifically reasonable provisions and not to decide the appropriateness of individual situation retroactivity on a case-by-case basis based on vague ever-changing guidelines.

IX. The variability method utilized in the MACT floors to ensure the limits can be met during every day unit operating conditions is flawed.

EPA makes several errors in the assumptions on unit emissions variability that are critical and lead to MACT limits likely not attainable by the top performing units during every day and under all operating conditions.[42] First, the means of only three separate runs are used to determine the MACT upper prediction limit (UPL). Second, the sample means assume a normal distribution, which the underlying data does not support. And third, the samples do not account for the well known significant varied efficiencies of emissions control equipment over expected and varied operation conditions, whether at a constant but unusual load or under ramp up or down conditions. EPA must develop MACT limits that meet "every day and all operating conditions" of the top performing units. To achieve this, it must develop MACTs that utilize more data and better statistical assumptions.

X. EPA should develop a Section 112(d)(4) health- based standard for HCl.

The proposed HCl limits are based on several questionable assumptions. Available information does not support the contention that dry-sorbent injection (DSI) technology can achieve the levels of reduction necessary on EGUs using high chlorine eastern bituminous coals to meet the proposed MACT HCl limits. The alternative control option of Flue Gas Desulfurization (FGD) cannot be timely installed to meet the proposed compliance deadline as EPA admits.

[42] Id. at 25,041

Also, EPA's determination that over 56 gigawatts (GWs) of needed DSI technology can be installed in time to meet the compliance deadline raised issues related to whether the installation of dry scrubbers could be accomplished in time and whether the additional demands for the dry sorbent would be available in time.

EPA takes the position that establishing a Section 112(d)(4) HCl standard is inappropriate because information is not available to show acute exposures will not pose health concerns.[43] It appears, however, from EPA's analysis and preamble discussion that it believes that health risks due to acids gas exposures including HCl is minimal.

In view of these circumstances, we believe it is appropriate to issue HCl health-based standards that represent levels achievable for all EGUs in the category.

XI. Aspects of the work practice standards for dioxins, furans, and organic HAPs are unrealistic and need to be revamped.

While NRECA supports the concept of work practice standards for these HAPs, some of the requirements are not practically viable. As proposed, the minimum 18 month interval between inspections is not remotely consistent with established utility practice regarding periodic outages for maintenance and repair. A minimum 36 month period is required. In some cases conforming burner optimization to manufactures' specifications, as proposed, may be inconsistent with best practices for a unit in question. Or such specifications may not exist. Utilities should be able to implement their own best management practices if they are demonstrated to be best for the unit.

Also, the work practice standards need to accommodate situations when new parts are needed to optimize performance. For small systems, such as many rural electric cooperatives, many parts may not be inventoried and may take several months to acquire. To complicate matters, units

[43] Id at 25,050

may be in periods of high need, such as during summer or winter peaking when replacement parts become unavailable, thus making shutdown for repair not feasible due to reliability or other paramount concerns. In such cases, NRECA believes utilities should be given reasonable time to optimize considering the electric demands on the system.

XII. A PM filterable MACT limit should be used instead of a PM total metric.

The proposed PM total MACT is unworkable for several reasons. Methods 5 and 202 would be utilized to determine the condensable and filterable portions of PM total, with PM continuous emissions monitoring systems (CEMS) measurements used to set unit operating limits afterwards.[44] Method 5, however, does not and cannot account for variations in PM filterable actual levels over a range of unit operating levels that a PM CEMS would measure. So in effect, Method 5 measurements when compared to PM CEMS measurements over full unit operating conditions is like comparing apples to oranges. EPA has offered no rational explanation for offering this complicated and uncertain PM MACT where compliance is difficult to achieve. PM MACT should be based on a PM filterable limit only.

XIII. EPA needs to subcategorize for purposes of issuing realistic new unit MACT standards.

EPA's gross misuse of the "Franken" MACT concept is no more evident than in the new unit MACT standards. For example, the proposed PM MACT for new is based on a single unit with a FBC design having no FGD. This is an extremely low proposed new unit PM MACT limit, and in fact, a limit many times more stringent than the existing unit proposed MACT limit. EPA well knows the FBC combustion and emissions control processes are markedly different as compared to PC combustion with FGDs that emit small amounts of particulate matter as compared to a FBC with no FGD. Thus, the configuration and designs of FBC units and corresponding emission control allows them to achieve low levels of PM emissions that PC unit with an FGD cannot. No new PC unit requiring FGD installation, as would be the case under

[44] Id. at 25,029

PSD BACT requirements, can achieve the proposed new unit PM MACT. EPA should either subcategorize FBC units for purposes of developing MACT standards for new units or propose a new MACT PM standard achievable by PC units.

In fact, considering the combination of new unit MACT proposals, if EPA's "Franken" unit were required to meet the proposed "Franken" MACTs, it would have to have no FGD, a dry FGD, a wet FGD, an ESP, and finally a fabric filter, as well as be a FBC and a PC utilizing all coal ranks at once. Presently, there is not and cannot ever be a unit designed with this required configuration. In fact, Integrated Gasification and Combined Cycle (IGCC) technology cannot achieve the proposed new unit MACT levels.

Section 112(d) requires a new MACT standard must be based on the best controlled similar source. And yet, no one source exists or can exist that has the combination of technologies and combustion designs required to achieve all the proposed MACT standards. EPA must therefore propose new MACT standards based on subcatorization as required to comport with reality.

XIV. EPA should propose percent reduction alternatives to the numerical MACT limits.

EPA considered proposing percent reduction format of the MACTs but rejected it for several stated reasons; the format would not give credit for any fuel preparation or practices that limit HAPs prior to firing, the lack of data necessary to establish a percent reduction alternative, and a percent reduction metric may be inconsistent with the court's decision in the *Brick MACT* case.[45]

First, NRECA is suggesting that percent reduction MACT metric be considered as an alternative, and not a substitute, to some of the proposed MACT numerical limits, particularly those that appear too problematic to meet in reality. For example, Hg and HCL are HAPs whose levels would not be meaningfully reduced by fuel pretreatment. Second, a necessary data format and protocol could be developed for some HAPs, such as Hg, that would allow an appropriate

[45] Id. at 25,040

percent reduction alternative to be developed. Third, NRECA understands that the *Brick MACT*[46] decision stands for the preposition that a MACT level cannot be based on a specific technology, but that is not what NRECA is advocating here. A percent reduction MACT could specify the level or reduction but would not dictate any specific control or methodology.

XV. EPA should adjust the definition of units excluded from this rulemaking to include limited oil use based on the unit Btu annual designed rate.

Proposed § 63.9983 excludes from the EGU HAPs regulation units having an annual Btu oil heat input of 10 percent or less of the average annual total heat input averaged over three years with any year not to exceed 15 percent of the annual average. Excluding units that use little oil is appropriate for several reasons. The associated monitoring, compliance demonstrations, and associated costs for units using little oil are simply not justified. Also, units using small amounts of oil overall are not contributing any significant portion of emissions to the national or regional inventories that is the concern of this rulemaking.

NRECA believes, however, that the percentage oil exclusion in §63.9983 should be amended to exclude a unit if the annual oil based Btu input is 10 percent or less of the unit's Btu annual design rate. The rationale for extending this exclusion is the same as the excluding units based on oil based Btu input of 10 percent or less of the unit's annual heat input. That is, the costs of monitoring and compliance demonstrations cannot be justified when compared to the small emissions contributed to the overall emissions inventories that are the subject of this rulemaking. Additionally, oil exclusion based on the design rate criteria would give utilities needed leeway over successive years to avoid being brought in and out of the EGU HAPs program.

XVI. Hg MACT compliance should be based on an annual average due to fuel Hg variability and no potential short term environmental or health impacts.

[46] *Sierra Club v. EPA* 479 F.3d 875 (D.C. Cir. 2007)

There are several paramount reasons why the Hg MACT should be based on an annual rolling average. The preferred monitoring method likely utilized by most utilities would be the sorbent trap, because Hg CEMs technology is not likely to yield accurate and precise measurements. Sorbent traps have approximately two week collection intervals, so should a problem develop with one sample, 30 day compliance demonstrations would be extremely problematic. Further, as EPA is well aware, a major factor in Hg emissions concentration is the Hg fuel content. So it is quite possible the Hg content variability in coal utilized over a 30 day period could determine non-compliance regardless of best efforts of a utility to limit Hg emissions. Also, to the extent that Hg presents health or environmental concerns, according to EPA, it is because of long term bioaccumulation.[47] Thus, it makes little sense to require 30 day compliance when incorporating an annual rolling average compliance period accomplishes that same objective and eliminates the practical problems associated with the short term compliance average.

XVII. Operating limits or parameters should not be required on emission control devices where compliance is demonstrational by CEMs and operating limits should not be established based on initial performance testing.

EPA has proposed compliance and testing regimes that are unnecessarily complex and punitive. The proposed operating limits mandate numerous requirements for the gamut of emission control devices regardless of whether compliance is to be demonstrated by CEMs.[48] Since compliance would be judged by CEMs data, it is unclear why the proposed regulations require more than is necessary to show proper CEMs operation. These requirements are unnecessary and should be eliminated in the final rule.

EPA also requires performance tests to show initial compliance, such as for PM CEMs, where the results of the test establish a site operating limit. Besides being unnecessary, this approach

[47] 76 Fed. Reg. at 25,000-25,003

[48] Id. at 25029-25030

fails to account for differences in the emissions over a reasonable anticipated operating range of the unit. It is not necessary for compliance purposes and should be eliminated as a site specific requirement.[49]

XVIII. The plant wide averaging proposal should be broadened to all HAP affected sources at the plant site regardless of category or subcategory without an averaging discount penalty.

NRECA supports the proposed provisions that would allow plant wide averaging at a facility.[50] EPA offers no rationale, however, as to why the proposal limits averaging to units at the facility of the same HAPs category or subcategory. Since emissions averaging is cost beneficial without affecting the overall emissions reductions, NRECA believes it should be incorporated into the EGU HAPs program in as broad a fashion as possible. Further, NRECA can identify no benefit to imposing a penalty in the form of a discount factor as a price for sanctioning broad based trading, and we urge EPA not to impose one.

[49] The issue is also addressed under XII of these comments

[50] 76 Fed. Reg. at 25,053