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August 8, 2023

The Honorable Michael S. Regan, Administrator
U.S. Environmental Protection Agency
EPA Docket Center
Docket ID No. EPA-HQ-OAR-2023-0072
Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: New Source Performance Standards for Greenhouse Gas From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas emissions from Existing Fossil Fuel-Fired Electric Generating Units: and Repeal of the Affordable Clean Energy Rule.

Dear Administrator Regan:

The Midwest Ozone Group ("MOG")[1] is pleased to offer these comments on the proposal by the U.S. Environmental Protection Agency ("EPA") to establish New Source Performance Standards for Greenhouse Gas From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas emissions from Existing Fossil Fuel-Fired Electric Generating Units: and Repeal of the Affordable Clean Energy Rule, 88. Fed. Reg. 33240 (May 23, 2023). The comment period on this proposal closes on August 8, 2023. 88 Fed. Reg. 39390 (June 16, 2023).

MOG is an affiliation of companies and association that draws upon its collective resources to seek solutions to the development of legally and technically sound air quality programs that may impact on their facilities, their employees, their communities, their contractors, and the consumers of their products. MOG's primary efforts are to work with policy makers in evaluating air quality policies by encouraging the use of sound science. MOG has been actively engaged in a variety of issues and initiatives related to the development and implementation of air quality policy, including the revision of the ozone and particulate matter NAAQS, development of transport rules, NAAQS implementation guidance, the development of

[1] The members of and participants in the Midwest Ozone Group include: Alcoa, Ameren, American Electric Power, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, American Region Independent Power Producers Association, Associated Electric Cooperative, Big Rivers Electric Corp., Buckeye Power, Inc., Citizens Energy Group, City Water, Light & Power (Springfield, Il), Cleveland Cliffs, Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, ExxonMobil, FirstEnergy Corp., Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Municipal Power, Hoosier Energy, Kentucky Utilities, Louisville Gas & Electric, Marathon Petroleum, 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.

Good Neighbor State/Federal Implementation Plans and related regional haze, climate change, and environmental justice issues. MOG members and participants own and operate numerous stationary sources that are affected by this proposal. See also, www.midwestozonegroup.com.

We appreciate the opportunity to participate in this important rulemaking.

Sincerely,

Kathy G. Beckett
Counsel
Midwest Ozone Group

Attachment

Comments by the Midwest Ozone Group
On the U.S. Environmental Protection Agency's Proposed
New Source Performance Standards for Greenhouse Gas From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas emissions from Existing Fossil Fuel-Fired Electric Generating Units: and Repeal of the Affordable Clean Energy Rule.

88. Fed. Reg. 33240 (May 23, 2023)
Docket ID No. EPA-HQ-OAR-2023-0072

August 8, 2023

Introduction

The Midwest Ozone Group ("MOG") is comprised of numerous electric power producers, manufacturers and associations including power providers located in the states of: Arkansas, Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Oklahoma, Pennsylvania, Nevada, Texas, Utah, West Virginia, and Wyoming which provide power to the nation's grid providing reliable service to the nation.

1. **Legal Challenges to NSPS GHG EGU Proposal.**

   a. **Absence of clear congressional intent.**

The authority underlying the proposed New Source Performance Standards for Greenhouse Gas From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas emissions from Existing Fossil Fuel-Fired Electric Generating Units (hereinafter referred to as the "EGU NSPS") is referenced by EPA as CAA Section 111.

The U.S. Supreme Court decision in *WV, et. al. v EPA*, 213 L.Ed.2D 896, 142 S.Ct. 2587 (2022), rejected the Clean Power Plan ("CPP") based on the concern for generation shifting that was not authorized by CAA Section 111. The major questions doctrine invoked by the Supreme

Court recognizes that "in certain extraordinary cases, both separation of powers principles and a practical understanding of legislative intent makes [courts] reluctant to read into ambiguous statutory text the delegation [to an agency] claimed to be lurking there." EPA's new proposal, presents similar legal concerns. This proposal is an assertion by EPA of a "newfound power" in a decades old statute, reaching into the realm of a major questions, by promoting broad assumptions driving guaranteed changes in the energy sector.

With a focus on developing technologies and not yet adequately demonstrated and available, the EGU NSPS proposed new regulatory obligations that seem to be more about effectuating broader U.S. Department of Energy's ("DOE") initiatives funded in part by the Inflation Reduction Act ("IRA") and the Infrastructure and Jobs Act ("IIJA") than environmental regulations under the authority under CAA section 111.

In its "U.S. National Clean Hydrogen Strategy and Roadmap," DOE discusses the role of hydrogen in its self-described described the "ambitious" goal of reducing greenhouse gas pollution from 2005 levels by 50 to 52 percent in 2030 under the Paris Agreement and to create a carbon pollution-free power sector by 2035. p. 6. As part of an effort to "enable a successful market adoption of clean hydrogen technologies" in support of a net-zero GHG emission economy by 2050, DOE prepared its strategy and roadmap by collaborating with other Federal agencies and stakeholders to identify key actions. *Id.* at 8. The DOE strategy and roadmap specifically reference this proposed EPA rule.

> Initial deployments using clean hydrogen are expected to leverage regional energy resources and target industries that currently rely on conventional natural gas to hydrogen technologies (without CCS). *EPA proposes that hydrogen co-firing with natural gas is the best system of emissions reduction for certain subcategories of fossil fuel powered plants, and it would be among compliance options for CO2 emission limits on fossil fuel-fired power plants under Section 111 of the Clean Air Act.*[38] While these industries can rapidly generate scale and create near-term impact in terms of emissions reductions, concerted efforts must be made to solicit and address community concerns around NOx emissions,

> safety and leakage detection. Increased transparency must include acknowledging these potential risks while juxtaposing them with the extensive safety training, monitoring and detection technologies that have been developed.

Id. at 12.

> Achieving the Administration's goals for a 100 percent clean electricity grid will create demand for long-duration energy storage (LDES), where hydrogen can also play a key role. Estimates of the magnitude of LDES required in a clean grid have high variability, depending on the degree of electrification, buildout of transmission lines, and the rate at which other offsetting technologies, such as direct air capture, are deployed. Based on a range of studies with varying assumptions around these constraints, it is estimated that about 4-8 MMT/year of hydrogen would be needed in 2050 to supply energy storage and power generation for a 100 percent clean grid.[64] *Further, hydrogen can support carbon reductions in other power sector applications; EPA proposes to include hydrogen co-firing with natural gas as a compliance option for CO2 emission limits on fossil fuel-fired power plants under Section 111 of the Clean Air Act.*

Id. at 20.

Stated simply, EPA's collaborative effort to "enable a successful market" for an energy strategy leads well beyond the authorities of the Clean Air Act. See, *WV. v. EPA*. There lacks clean congressional intent for EPA to promulgate rule to drive changes in the long-range planning of the energy sector and manage the U.S. energy market economy. EPA would be well-advised to review the recent Supreme Court case and its articulation of the proper scope of CAA Section 111 authority and craft a rule that is based on a solid legal foundation.

b. Inadequate demonstration of selected controls as Best System of Emission Reductions.

EPA proposes that it "may determine a control to be "adequately demonstrated" even if it is new and not yet in widespread commercial use, and, further, that the EPA may reasonably project the development of a control system at a future time and establish requirements that take effect at the time." *Id.* at 33243. EPA's projection of the development of carbon capture and storage facilities and low-GHG hydrogen production is contingent upon the ability of the DOE to timely complete its efforts to fund installation (permitting) and actual operation of these technologies. Funding Opportunities Announcements from DOE are currently being announced meaning that are is no widespread technological or operational example of an adequate demonstration of utility scale carbon capture utilization and/or storage nor hydrogen production. This proposal suggests carbon capture compliance will be BSER for large and frequently used existing combustion turbines based on either 90% capture of CO2 using CCS by 2035, or co-firing of 30% by volume low-GHG hydrogen beginning in 2032 and co-firing 96% by volume low-GHG hydrogen beginning in 2038. For fossil-fuel fired stationary combustion turbines that are intermediate load or baseload affected facilities at Phase 2 and 3, the carbon capture pathway would require compliance by 2035. For existing coal units, carbon capture would be required for those units operating in the long-term (i.e., after December 31, 2039). DOE addresses the challenge to achieving the benefits of clean hydrogen by commenting,

> These remaining challenges include lack of ubiquitous hydrogen distribution infrastructure, lack of manufacturing at scale, cost, durability, reliability, and availability challenges in the supply base across the entire value chain. At present, producers also struggle to find offtakers with sufficient hydrogen demand sited within an affordable distance to hydrogen production who are willing to sign long term contracts. Stakeholders on the production, demand, and financing sides highlight hesitancy to commit resources due to lack of price transparency and risks in clean hydrogen supply. Regulatory drivers at the state and federal level could help provide these long-term demand signals.

Id. at 24.

EPA's timing is unrealistic as evidenced by the Congressional Report, "Pipeline Transportation of Hydrogen: Regulation, Research, and Policy," that presents several major safety concerns about hydrogen pipeline development. The timeline in this proposal does not allow for adequate hydrogen pipeline infrastructure development. Unresolved issues related to hydrogen transportation present significant hurdles. For example, green hydrogen has a flammability range in air at 4-75% (methane us 5 – 15% for comparison). Hydrogen gas cloud in an open area will burn quickly back to its source and is a clear flame that is imperceptible in daylight or artificial light. This creates a safety hazard to workers if a unit had a leak in the pipeline or to the public for major pipelines. Someone could get burned by getting too close to a hydrogen fire that was not visible. Development of odorants to assist with leak detection are ongoing. Finally, siting of hydrogen pipelines remains an open regulatory and legal dilemma.

DOE represented in 2022 that there were 12 carbon capture and storage projects in the United States with a total capacity of 20 million metric tons of CO2 per year. By 2030, carbon capture projects are predicted to capture and store 128 million metric tons of carbon dioxide in the US. USDOE "Carbon Capture, Use, Transport, and Storage," Fact Sheet, June 20, 2023.

DOE identifies economic and commercial factors impacting carbon capture and storage.

> Cost uncertainty, as project costs remain high for some types of point-source CCUS applications and early deployments of certain CDR technologies. – Demand uncertainty, driven by an absence of compliance markets and limited evidence of bankable revenue streams for low-carbon products and voluntary carbon removals. – Lack of commercial standardization for the partnerships and commercial arrangements carbon management projects will require. Execution factors: – Lead times in permitting storage infrastructure which many developers see as a potentially lengthy and uncertain process. – Lack of transport and storage infrastructure in some areas could slow execution of capture projects. – Local opposition to project development in some instances.

USDOE, "Pathways to Commercial Liftoff: Carbon Management," April 2023. p. 22. Within the "Congressional Research Service: Carbon Dioxide Pipelines: Safety Issues" report it is estimated that 66,000 miles of pipeline will be needed for CO2 lines to support CCS. PHMSA has announced they are developing a rulemaking for CO2 pipeline safety standards, which has not occurred to date. It is not appropriate for EPA to require the construction of CCUS technology and related pipelines, until PHMSA has finalized the safety standards. EPA offers nothing in its proposed rule that disputes the speculative nature of CCS and hydrogen other than the opening statement that legally the agency is confident its projection for the development of CCS and hydrogen as adequate demonstrated selected controls as Best System of Emission Reductions ("BSER"). The facts do not support EPA's confidence, rendering the conclusion that the agency's proposal arbitrary and capricious.

c. EPA's subcategorization of EGU stationary sources is improperly derived.

Section 111(b)(2) of the CAA provides for the authority for the Administrator to distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards. EPA offers that it interprets 111(d) as also allowing the Agency to place types of sources into subcategories when they have characteristics that are relevant to controls that EPA may determine to be BSER for those sources. *Id.* at 33345. The subcategorization EPA has created for coal-fired steam generating units is executed based on the "operating horizon" or retirement of the sources.

> Subcategorizing on the basis of operating horizon is consistent with a central characteristic of the coal fired power industry that is relevant for determining the cost reasonableness of control requirements: A large percentage of the industry has announced, or is expected to announce, dates for ceasing operation, and the fact that many coal-fired steam generating units intend to cease operation, and the fact that many coal-fired steam generating units intend to cease operation affects what controls are "best" for different subcategories. Sources that have shorter operating horizons will have less time to amortize capital costs and the controls will thereby be less cost-effective and therefore may not qualify as BSER.

Id. at 33345. Rather than assess sources with shared or similar physical attributes that would inform a BSER determination, EPA turns to generation shifting metrics found in retirement of units. Retirements that are facilitated by this very proposed rule. It is anticipated that the retirements predicted are based on planning and implementation assumptions that are based on technology timeframes that are simply unrealistic. In a tabletop assessment many retirements would be required because the technology will not be available. This rulemaking unlawfully departs from historic implementation of CAA 111 concerning classes, types, and sizes where technical design and operations were key to an informed agency action. The proposal also fails to acknowledge the statutory limitations of the Clean Air Act concerning the major questions doctrine as applied to selecting energy strategies as opposed to clean air emissions limitations. *WV. v. EPA.*

In the proposed rule, base load coal-fired EGU units are assigned two speculative pathways as potential BSER – (1) the use of CCS emissions to achieve 90 percent capture of GHG emissions by 2035 and (2) the co-firing of 30 percent (by volume) low-GHG hydrogen by 2032, and ramping up to 96 percent by volume of low GHG hydrogen by 2038. *Id.* EPA comments that "These two BSER pathways both offer significant opportunities to reduce GHG emissions but, may be available on slightly different timescales." *Id.* EPA's tentative prediction about the future availability of these two technologies is informed by DOE's qualified prediction about the ability of the nation to develop an economy using CCS and/or low-GHG hydrogen at a cost acceptable to the market. EPA's Regulatory Impact Analysis ("RIA") predicts adoption of coal-based CCS, with between 1-3 GW of capacity using the technology. EPA also predicts that just 13 GW of natural gas capacity will co-fire with hydrogen by 2040. The boot strapping of support for these technologies demonstrates the lack of actual emissions reductions strategies that can be relied upon to deliver the air quality benefits promised. EPA's statements of benefits (and costs) are misleading. EPA's RIA projects BSER (carbon capture and/or hydrogen co-firing) will result in only one percent of additional emissions reductions in 2040.[1]

2. Technical Challenges to NSPS GHG EGU Proposal.

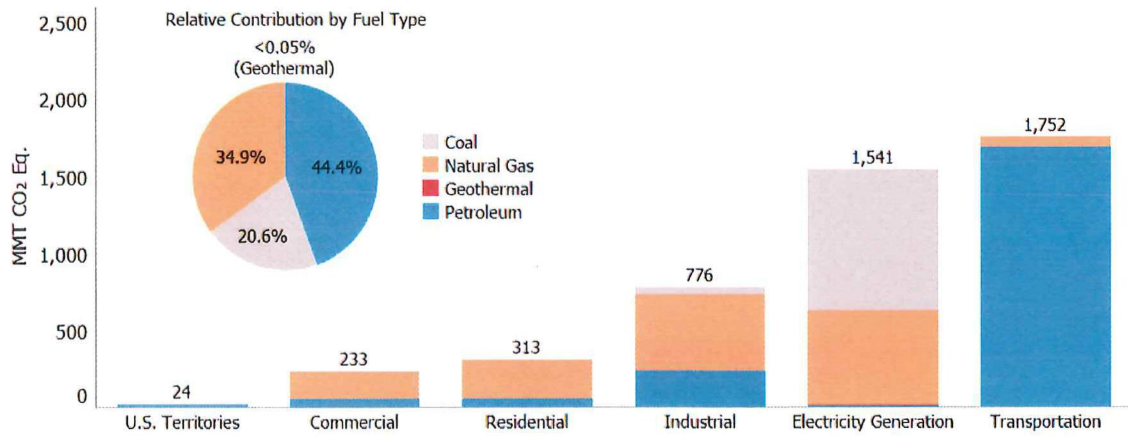
a. EPA fails to factor in the U.S. policy initiative to return manufacturing to the U.S. and electrification of other source sectors that will impact the GHG inventory.

EPA's "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2021" (published 2023) provides important insights into the catalogue of anthropogenic sources and current/future

[1] "A Closer Look at EPA's Powerplant Rule" U.S. Chamber of Commerce, Global Energy Institute (June 2023), p. 8.

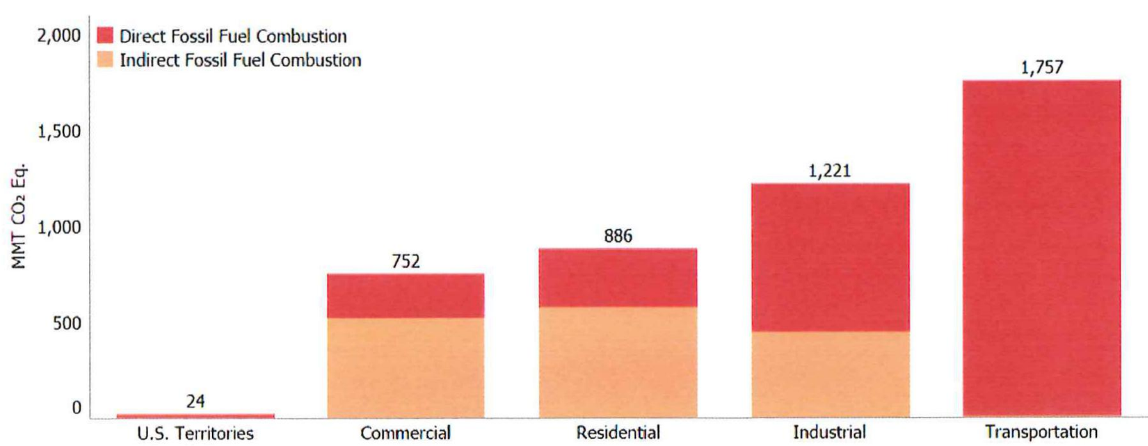
management opportunities relative to GHGs. The five major fuel-consuming economic sectors are transportation, electric power, industrial, residential, and commercial. Carbon dioxide emissions are produced by the electric power sector as fossil fuel is consumed to provide electricity to one of the four sectors, or "end-use" sectors as set forth in Figures ES-5.

Figure ES-5: 2021 CO_2 Emissions from Fossil Fuel Combustion by Sector and Fuel Type



The following Figure ES-6 summarizes CO2 emissions from fossil fuel combustion by end-use sector showing electric power emissions for each end-use sector on the basis of each sector's share of aggregate electricity use.

Figure ES-6: 2021 End-Use Sector Emissions of CO_2 from Fossil Fuel Combustion



Transportation activities accounted for 37.9 percent of U.S. CO2 emissions from fossil fuel combustion in 2021, with the largest contributor being light-duty trucks (37.3 percent), followed by freight trucks (23.3 percent) and passenger vehicles (20.8 percent). *Id.* at ES-10. EPA notes the decline in direct and indirect emissions from the industrial sector by 20.7 percent since 1990. "This decline is due to structural changes in the U.S. economy (i.e., shifts from a manufacturing-based to a service-based economy), fuel switching, and efficiency improvements. From 2020 to 2021, total energy use in the industrial sector increased by 3.7 percent, due to increase in total industrial productions and manufacturing output." *Id.* at ES- 11. U.S. initiatives to move manufacturing to a U.S. domestic model will significantly impact the U.S. GHG emissions inventory.

Invoking the NSPS authorities, EPA invites the reader to only look to one sector, EGUs, as the solution to the planned economic growth and increase in GHG emissions by EGUs. "In 2020, the power sector was the largest stationary source of GHGs, emitting 25 percent of the overall domestic emissions. These emissions are almost entirely the result of the combustion of fossil fuels in the EGUs that are the subjects of these proposals." *Id.* at. 33243. " . . .with increased electrification of other GHG-emitting sectors of the economy, such as personal vehicles, heavy-duty trucks, and heating and cooling of buildings, a power sector with lower GHG emissions can also help reduce pollution coming from other sectors of the economy." *Id.* EPA's proposed rule triggers reforms of the EGU source category as a surrogate for revisions to the energy economy of the United States. The Clean Air Act does not provide such authorities per *WV. v. EPA*.

b. Air quality impacts are not presented in a transparent manner.

The proposed rule is anticipated to lower power sector carbon emissions by an additional 1% over that which the IRA is predicted to deliver, according to EPA's IPM modeling. An issue of concern is the late release by EPA on July 7, 2023 of a memorandum titled, "Integrated Proposal Modeling and Updated Baseline Analysis." This document has 22 attachments and four new IPM model run outputs, with each model containing 18 separate Microsoft Excel spreadsheet outputs totaling 129 megabytes of data. These new data were released only 21 business days before the close of the comment period. The new data represents a significant change from the original analysis of the proposed rule. EPA failed to provide a reasonable time period for comment to its revised proposal, in violation of the Administrative Procedures Act and the Clean Air Act. This proposed rule again advances unprecedented reform to the energy economy and it fails to provide adequate public participation.

c. Grid reliability is placed at risk with this proposal.

EPA has included in this proposal the flexibility for power companies and grid operators to plan for achieving feasible and necessary reductions of GHGs in order to ensure grid reliability. EPA has incorporated into this proposal reference to renewable energy, energy storage, co-firing hydrogen as a fuel supplement, and construction of new peaking units to name a few examples as part of its effort to manage grid reliability. Yet, there is significant concern that EPA's assumptions are not realistic. On point is the June 1, 2023 statement offered by Manu Asthana, President and CEO, PJM Interconnection, to the U.S. Senate Committee on Energy & Natural Resources:

> The pace of retirements is being driven in large part by state laws and federal environmental initiatives that create a clear near-term, date certain requirement for generation to comply or retire. On the other hand, the pace of additional new renewable generation is currently slower than anticipated.
>
> . . .
>
> The reliability challenge from prematurely losing resources we need to manage the grid dominated by intermittent renewable generation is concerning. Identifying this possible outcome now affords us an opportunity to manage this transition in an orderly and coordinated fashion that ensures the continued supply of reliable electric power.

. . .

> *If the rate of premature retirements continues to outpace installation of replacement generation with the attributes necessary to maintain grid reliability, the nation may well face challenges with maintaining adequate supply to meet electric power demand, at the very time we are moving aggressively to electrify the transportation and home heating sectors.*
>
> . . .
>
> There is a critical need for integrating analysis of the reliability impact of specific state and federal policies prior to those policies being adopted. We remain concerned that compliance dates that impact the generation fleet are being chosen without such a rigorous analysis always being undertaken. Although EPA does undertake a limited analysis in certain rulemakings, its analysis does not take into account the reliability attributes needed by system operators or the feasibility of cost of the compliance alternatives proposed in the particular rulemaking. From a process standpoint, it would be appropriate for a more thorough reliability analysis to become a standing requirement for federal actions that could impact reliability. And although EPA has entered into a Memorandum of Understanding with the Department of Energy to consider reliability issues as part of EPA rulemaking deliberations, the reliability analysis and consultation should be undertaken with those entities that actually operate the grid in addition to, and not as a replacement for, coordination with DOE.

(Emphasis added).

Another confounding issue related to this proposal that creates grid reliability concerns is New Source Review (NSR) requirements. If the emissions rates (i.e. pounds per million Btu, pounds per hour) for all other NSR pollutants remain the same, the baseline of actual emissions essentially reflects the baseline historical heat inputs and capacity factors from the most recent 5 years. Considering the reduced operating levels of the coal-fired plants, and possibly some of natural gas-fired plants, the baselines for these units will reflect very low operating levels. It has been identified by others that CCS will add as a minimum an additional 20-25% of the plant's generation to station service which will be megawatt hours (MWhs) that were previously sold into the grid. Consequently, there will be even fewer MWhs available from these sources exacerbating grid reliability. Following are calculations demonstrating this effect:

1,000 MW gross installed capacity with 8% station service results in 920 MW net installed capacity. (This is for example purposes only). At a 35% annual capacity factor, 2,820,720 net MWhs would be generated to sell into the electric market or to ratepayers (920 MW * 8,760 hours *0.35). If this 35% capacity factor reflected the operations during the baseline periods then the available MWhs available to the electric markets will be reduced to a range of 2,115,540 MWhs to 2,256,576 MWhs.

Elimination of 20-25% of the previously available electricity, in addition to limiting the operations to the baseline operations during the most recent previous 5 years, will make it very difficult for merchant generators to obtain necessary funding for investment in CCUS. It may also make it difficult for rate-based generators to receive regulatory approval to construct these projects. This situation doesn't just affect the annual operations and available MWhs to the electric market, it also reduces the peak generating capability as well. This loss of MWhs to station service essentially makes a 1000 gross MW unit (920 net MW unit) into a 690 to 736 net MW unit. Greatly reducing the ability of the unit to be able to provide the peak power necessary during high demand periods.

NSR implications could also be of concern when modifying the natural gas-fired plants to co-fire hydrogen. Especially older natural gas-fired NGCCT plants that emit above the current Best Available Control Technology/Lowest Achievable Emission Rate (BACT/LAER) limit of any NSR pollutant.

NSR concerns and issues must be addressed prior to or as part of mandating CCS or hydrogen blending for electric generating sources or any other major source.

Consequently, this proposal does not allay electric reliability concerns but exacerbates those concerns placing at risk the nation's key infrastructure for electricity that is critical to the health and well-being, and security for <u>all</u> citizens of the United States.

d. Enforcement discretion is not a reasonable solution to this rule.

EPA also proposes that its enforcement discretion allows it to take into consideration electric reliability and the emissions reductions under these proposed emissions guidelines. Agency enforcement discretion does not allay concerns for third party actions making enforcement discretion meaningless. EPA proposes that it has the discretion to negotiate resolutions to sources in violation of this final rule and related state implementation plan in the form of an Administrative Compliance Order that will include expeditious compliance schedules with enforceable compliance milestones. Directing the public to speculative technologies and "declared" enforcement discretion creates an unstable regulatory scenario where the federal agency offers: (1) prospective promises as opposed to tangible assurances of improved air quality, and (2) grid reliability to generate the electricity needed to ensure national well-being and security. EPA's proposal is arbitrary and capricious and an abuse of discretion.

e. Compliance cost impacts are misleading.

EPA's RIA relies heavily upon deliverables from the IRA funding. EPA fails to acknowledge the unknown variables presented by permitting, supply chain limitations, and available technology for emissions controls. The cost impacts of this proposal are not readily discernible based on the broad scope of this proposal and its failure to acknowledge other CAA regulatory actions for the mobile source sectors that will increase demand for electricity. This proposal is arbitrary and capricious and an abuse of discretion.

f. Environmental justice analysis highlights modest domestic ambient impacts and fails to acknowledge economic stress of this proposal rule as it impacts compromised communities to respond to generation shifting.

EPA notes this proposal is anticipated to lead to modest but widespread reductions in ambient levels of PM2.5 for a large majority of the nation's population. This proposal is anticipated to also lead to modest but widespread reductions in ambient levels of ground-level ozone for the majority of the nation's population, and that in all but one of the years evaluated the proposed standards would lead to reductions in ambient ozone exposures across all demographic groups. EPA provides that although these reductions in PM2.5 and ozone exposures are small relative to baseline levels, and although disparities in PM2.5 and ozone exposure would continue to persist following these proposals, the EPA's analysis indicates that the air quality benefits of these proposals would be broadly distributed. EPA fails to note the enhanced environmental impact on poor communities that will be and are compromised due to EPA's energy transition goals as set forth in this proposal. Grid reliability implies electricity available to all users, not simply a few. Compromised communities faced with increased unemployment, expensive and intermittent electricity, and other factors enhanced by this proposal (i.e., supply chain shortages, reduced tax base for education and connectivity) are again adversely impacted. This proposal offers no meaningful opportunity for those communities to engage in this proposal as their issues are not presented or deemed relevant.

3. **Compliance Flexibilities**

EPA's proposal is extremely aggressive, and its timing is unreasonable. EPA does propose some forms of compliance flexibility: however, it should be noted that, even if fully implemented, compliance flexibilities like emissions averaging and cap and trade programs will not be sufficient to overcome the proposal's shortcomings, particularly for existing units.

Moreover, they will require considerable efforts for states to develop and implement their own plans at the same time they are trying to develop the mandatory elements. It is recommended that EPA expedite this process by developing a model rule for emissions averaging similar to the Acid Rain Program's Title IV NOx averaging plans. With a model rule, states could choose to adopt a plan that is known to be approvable. Suggestions for flexibilities include:

i. Issuing a model trading rule for existing sources that states may opt into and that would be a fully approvable and automatic state plan. The vast majority of states do not have the experience with emissions trading programs that EPA has, nor do most states have the resources that are needed to create these types of programs. EPA can remedy that by preparing a model trading rule that states could adopt. This would leverage EPA's expertise in this area while simultaneously keeping states from wasting resources trying to figure all of this out for themselves.

States that choose to adopt any model trading rule that EPA issues would also benefit from the certainty of having automatically approvable state plans. This approach would particularly benefit those states with limited resources and/or only limited affected EGUs. For these states, compliance flexibility may effectively be non-existent unless there can be emission trading or averaging with other states. If a state desires to cooperate with other states, the approach of having a model trading rule would relieve them of the time, legwork, and uncertainty involved in coordinating and negotiating with dozens of other jurisdictions. Finally, this provides EPA with a federal plan template that it can use if any state either fails to submit a state implementation plan or if EPA ultimately determines that the state plan is deficient.

ii. Promoting emissions trading. In the proposed rule, EPA asks for feedback on how a cap-and-trade program could be structured for existing affected sources. EPA is encouraged to issue a model rule that is broadly applicable across all affected EGUs, regardless of their subcategory and regardless of whether they are steam generating units or stationary combustion turbines. Emissions trading has historically provided flexibility for EGUs to achieve emissions reductions at a lower cost, to prioritize investments more economically and provide a better pathway to balancing grid reliability with environmental goals.

iii. Providing states with alternative mass-based, presumptively applicable emission limits. Any model trading rule developed by EPA should be mass-based. Expressing the emission limit as a mass-based rate has numerous advantages. Those include making it easier for states to incorporate flexible compliance mechanisms such as emissions averaging or cap-and-trade programs into their state plans. In addition, EGUs have a lot of experience and familiarity with cap-and-trade programs (such as the Acid Rain Program and the Cross-State Air Pollution Rule) that are mass-based. Staying with an approach that is proven and with which EGUs have significant experience makes sense. Mass-based emission limits would lessen impacts on grid reliability and provide a balance to compliance risk for sources as fossil fuel fired EGU's approach retirement, while still ensuring they can be there when needed for grid reliability reasons during extreme hot or cold periods when the grid may be strained.

Finally, whether EPA issues a model trading rule or not, EPA should convert any presumptively approvable emission rates for affected EGUs into presumptively approvable mass-based emission rates from rate-based standards (lb CO2/MWh) into mass-based standards (tons CO2/year).

MOG appreciates this opportunity to participate in the public comment process.