AMERICAN PUBLIC POWER ASSOCIATION
Powering Strong Communities

October 15, 2024

Via electronic correspondence at Thompson.Lisa@epa.gov

Ms. Lisa Thompson
U.S. Environmental Protection Agency, Office of Air and Radiation
109 T.W. Alexander Drive
Research Triangle Park, NC 27711

RE: American Public Power Association Comments
Federalism Consultation on the Proposed Combustion Turbine Rules

Dear Ms. Thompson:

The American Public Power Association (APPA or the Association) appreciates the opportunity to provide comments for the Environmental Protection Agency's (EPA or Agency) consideration in the federalism consultation for the forthcoming EPA combustion turbine rules (the CT Rules). These Rules include three proposed rules: The Proposed New Source Performance Standards Review for Stationary Combustion Turbines (CT NSPS), the Proposed Reconsideration of National Emissions Standards for Hazardous Air Pollutants: Stationary Combustion Turbines (CT NESHAP), and the Proposed Emissions Guidelines for Greenhouse Gas Emissions from Existing Stationary Combustion Turbines (CT GHG Rule).

APPA's members operate approximately 53,680 megawatts of power generation plants with natural gas CTs that will be directly affected by the forthcoming CT Rules.[1] The Association and its members have a strong interest in providing comments to inform EPA's future regulatory approach for this category of sources. APPA has been fully engaged in discussions with EPA on these Rules and has submitted written comments in rulemaking and nonrulemaking dockets for CTs. Thank you for your continued consideration of APPA's perspectives on these important regulations.

I. Introduction.

A. About APPA.

APPA is a trade association composed of not-for-profit, community-owned utilities that provide electricity to 2,000 towns and cities nationwide. APPA protects the

[1] 2024 Public Power Statistical Report, https://www.publicpower.org/system/files/documents/2024-Public-Power-Statistical-Report.pdf

interests of the more than 49 million people that public power utilities serve and the 96,000 people they employ. Our members strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power. Our Association advocates and advises on electricity policy, technology, trends, training, and operations. Regarding the CT subcategory, APPA has regularly engaged in written comment opportunities in response to EPA's solicitations over the years. APPA filed comments in the EPA 2022 nonregulatory docket to "Solicit Public Input on the Agency's Efforts to Reduce Emissions of Greenhouse Gases from New and Existing Fossil Fuel-Fired Electric Generating Units" (EPA-HQ-OAR-2022-0723).[2] APPA filed three sets of substantive comments in the proposed Greenhouse Gas Section 111 Rule (the Proposed GHG Rule) docket, which applied to the CT subcategory before EPA decided to defer further action on existing CTs.[3] Most recently, APPA filed comments on May 28, 2024, in the CT nonrulemaking docket, entitled "Reducing Greenhouse Gas Emissions from New and Existing Fossil Fuel-Fired Stationary Combustion Turbines."[4]

APPA and our members have been and continue to be dedicated to clean air in our communities and the protection of the environment. Our members have made significant investments to reduce emissions and become compliant with the suite of air regulations that EPA has promulgated over the last ten years. Many members are impacted by the Final Greenhouse Gas Section 111 Rule (the Final GHG Rule),[5] which affects existing coal-fired units and new gas-fired generation. Compliance with the Final GHG Rule will require substantial environmental compliance investments, retirements, and replacement generation to be built. Therefore, ensuring that further regulatory impacts on existing resources are workable is a high priority for our membership, which strives to sustain affordable, reliable power for America's towns, cities, and municipalities nationwide.

B. CTs are essential to grid stability.

Existing natural gas CTs are reliable generation assets that will maintain reliability during the grid's transition to lower and non-emitting generation resources. Natural gas CTs are dispatchable resources, responding when called upon by grid operators. As other dispatchable resources retire, the role of CTs is becoming even more important to ensure adequate capacity, inertia, and voltage support. Grid operators are projecting significant demand growth in the coming years. As one grid operator observed, "In MISO's region, we see a trend toward declining accredited

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[2] *See* APPA comments at https://downloads.regulations.gov/EPA-HQ-OAR-2022-0723-0016/attachment_1.pdf
[3] *See* APPA comments at https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0566/attachment_1.pdf (Proposed Rule general comment period); https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0895/attachment_2.pdf (SBAR process); https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-8231/attachment_1.pdf (Small entity comment solicitation).
[4] *See* APPA comments at https://www.regulations.gov/comment/EPA-HQ-OAR-2024-0135-0112 (APPA Comments May 2024 Nonrulemaking Docket).
[5] 89 Fed. Reg. 39,798 (May 9, 2024).

capacity and increasing load."[6] CT generation must be preserved at its currently-rated capacity so as not to further exacerbate these grid resource challenges.[7]

CTs are integral in meeting requirements to meet planning reserve margins set by regional transmission operators and independent system operators (RTOs/ISOs). The support CTs provide to the electric grid will only increase as many RTOs have increased their planning reserve margins (PRM), which they require utilities to maintain in support of respective regional grid(s). PRM represents the amount of backup power utilities must have to guard against unplanned events and/or conditions on the regional power grid. The Southwest Power Pool (SPP) recently approved increases to its PRMs from 15% in both winter and summer to 16% in summer and 36% in winter beginning in 2026. Regulatory requirements for new and existing CTs could result in less utilization of the full capacity of these units, thereby decreasing the generation ability normally relied on by RTOs to meet the PRMs. RTOs are expected to further increase the PRMs again in the future.

CTs stand in contrast to intermittent renewable resources. Renewable assets offer variable responses to demand. Their availability is often dependent on seasonal patterns and weather. As a result, when renewables are unavailable, CTs often dispatch to ensure demand is met.

CTs come in different sizes, types, and roles. With over 315 coal-fired baseload plants coming off-line in the past ten years (2012-2022), CTs serve as replacement baseload generation. While some CTs are peakers, some also serve as a backup generation. Many CT assets also feature dual-fuel capability, meaning that they can be reliably dispatched despite potential natural gas supply constraints. Any regulation imposed on gas CTs as a subcategory should preserve these roles to assure grid stability. Any additional regulatory burden for these essential units should be balanced against their fundamental importance to the stability of the grid, the minimal marginal impact EPA's proposed mitigation technologies would make, and the significant costs involved.

Renewable energy cannot sustain a reliable grid due to the intermittent nature of this resource. Dispatchable resources are critical to consistently serve load and maintain grid stability. CTs serve that indispensable role. Modern CTs can ramp up to

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[6] *See* S&P Global, *"Outlook 2024: MISO expects net addition of 11 GW, may face tight reserves*," https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/outlook-2024-miso-expects-net-addition-of-11-gw-may-face-tight-reserves-80973711

[7] MISO Comments, https://www.regulations.gov/comment/EPA-HQ-OAR-2023-0072-0623, at 6 ("Studies conducted on integrating increasingly higher penetrations of renewable resources into the grid have found that as the resource mix continues to evolve, it is crucial for reliability purposes to maintain certain levels of resources with attributes such as firm fuel supply, quick start-up and ramping capabilities, synchronous connection to the grid, and ability to operate for both short and long periods of time. Currently, natural gas-fired combustion turbines, and at times coal, are a major source of these needed reliability attributes.").

their full output in as little as ten minutes.[8] They may chase renewable load when renewables are not available and are able to quickly ramp down. This agility minimizes emissions related to start-up and shutdown, supporting the integration of intermittent renewable resources. CTs also have the benefit of stabilizing the syncing of alternating current and voltage waves, needed for stable power flow. Newer aeroderivative units have synchronous condensers that can resolve power quality issues, assuring proper syncing on the grid. Previously, coal-fired units served this role.[9] In summary, CTs come in all sizes and purposes, each of which serve an essential role in maintaining a reliable grid. This diverse sector must have a flexible, tailored regulatory solution that does not hamper their service.

C. The Grid Transition Places Further Importance on CTs.

For CTs to stand in the place of retiring coal-fired dispatchable assets, the CT Rules must be nimble and feasible. APPA offers mechanisms for EPA to assess as the tools to tackle these goals. Indeed, lengthy, costly, or unproven emissions controls would be counterproductive to the overall goal of reduction of greenhouse gases while maintaining electric reliability. As discussed herein, APPA suggests a subcategorization regulatory design tailored to the diverse CT fleet, paired with flexible implementation options for state plans. These elements are particularly important for small entities that require more time to transition due to limited generation assets, compliance timelines, and financing. In addition, APPA strongly encourages EPA to meaningfully engage with grid operators during the development of the CT Rules. RTO/ ISO feedback is essential to understanding the resource and reliability challenges and interconnection timelines. We appreciate EPA's recognition of these considerations, as described in our more detailed comments below.

II. Best System of Emission Reductions for Existing CTs.

EPA's federalism consultation seeks additional input on the feasibility, cost, pollution impacts, energy impacts, and other advantages and disadvantages of carbon capture and storage (CCS), hydrogen co-firing, and efficiency as well as other systems (e.g., efficiency improvements, batteries) that EPA should consider when setting the best system of emission reduction (BSER).

A. CCS

APPA members continue demonstrating leadership in developing carbon dioxide (CO_2) emission-reducing technologies like CCS and hydrogen co-firing. However, these technologies have not been adequately demonstrated and cost-effectively deployed on existing CTs. Further evaluation is necessary and should include, at a minimum, how many utility-scale CCS systems are operating on existing gas turbines, the permitting and other challenges associated with building pipelines to transport CO_2, and the

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[8] Daniel Bush, Burns & McDonnell Blog, *A Bridge Fuel, But for How Long?*, https://blog.burnsmcd.com/the-future-of-gas-generation-in-an-increasingly-decarbonized-world
[9] *Id.*

permitting and other environmental risks associated with geological sequestration. Natural gas-fired generation produces less CO_2 per megawatt hour than coal-fired facilities. Thus, the capture plant design has to be adjusted for a lower concentration of CO_2 in the flue gas. Additionally, CTs are more likely to be throttled for load-following applications than coal-fired plants. If the CCS system were to ramp up with the CT, it would add significant demands and stresses to the attached CCS system.[10] In addition, some CTs are designed and intended to cycle daily to follow load, rather than serving as baseload units. They are quick start, standing ready for dispatch by RTOs. CTs designed for this type of duty are not operationally compatible with CCS due to the time required for CCS systems to startup. Based on the current status of CCS technology, outlined in the technical report that accompanied our comments on the Proposed GHG Rule, we are confident that a full assessment will illustrate that CCS is not an appropriate BSER and should not be the basis for setting performance standards for any existing resources, let alone existing CTs.

Public power utilities are preparing compliance strategies for the final GHG rule and are considering the costs of CCS projects in the process of deployment. For instance, the front-end engineering study for the Minnkota CCS project capture system (Project Tundra) to partially treat the flue gas from two coal-fired units is $10-11 million. The cost to build the capture system, excluding costs associated with developing geologic storage, are estimated at over $2 billion dollars. Operational costs are not included.

Public power utilities have expressed doubts concerning the feasibility of CCS as a proven technology based on the lack of commercially viable projects to capture CO_2 at 90% consistently. Our members have identified timing, financial, and workforce issues inherent in these project builds, such as materials constraints, protracted permitting timelines, financial inadequacy, and geologic infeasibility in many areas of the country. CCS also consumes at least 30% of a given unit's production in parasitic load. Nonetheless, public power entities continue to evaluate CCS deployment, as shown in recent integrated resource plans (IRPs). The results of these modeling exercises are instructive as EPA considers CO_2 emission limits for existing CTs.

One APPA member reports that the cost for a CCS feasibility study for geologic sequestration of CO_2 is $156,500 (includes regional geological CCS evaluation, igneous CO_2 mineralization evaluation, industrial off-take of CO_2 assessment, and conceptual pipeline engineering and design). The utility engaged in a high-level modeling scenario for the IRP based on industry average costs of installing a capture system. The IRP reports that the long-term scenario of 90% capture of CO_2 would cost the utility $254,092,000 more than the base case scenario of $978,200,080 for Nearman Creek Unit 1, a smaller 235 MW unit in Kansas.[11] The elevated costs associated with this scenario are due to lower efficiency measures, lower capacity accreditation, lower

[10] Department of Energy, Carbon Capture Opportunities for Natural Gas Fired Power Systems, carbon-capture-opportunities-natural-gas-fired-power-systems (energy.gov).

[11] Kansas City Board of Public Utilities, 2024 Integrated Resource Plan at 5-43 (KCBPU 2024 IRP), https://www.bpu.com/Portals/0/pdf/2024-BPU-IRP-Report.pdf.

output, and higher capital costs, which result in substantially higher overall costs compared to expected levels under current environmental requirements. The all-in cost to retrofit the single existing coal-fired generation unit in this example would be $1,232,292,000.[12] This estimate does not include costs to store or transport the CO_2, which could result in hundreds of millions of dollars in addition to this total.

B. Hydrogen Co-firing

EPA's decision not to finalize hydrogen co-firing as a BSER pathway for existing coal and new natural gas units under the final GHG rules was appropriate. Mandating hydrogen co-firing redefines the source, contrary to the Clean Air Act (CAA). Rather, EPA has historically set CAA section 111 emissions limitations based how the regulated source could reduce emissions rather than shifting to a cleaner source. *West Virginia v. EPA*, 597 U.S. 697, 720 (2022). The same reasoning and logic must apply to existing CTs.

In addition, hydrogen co-firing cannot meet the legal standard of adequate demonstration because co-firing hydrogen in significant amounts and for extended periods has never been accomplished. While hydrogen co-firing is a promising technology development, it is still nascent. Hydrogen storage and transportation infrastructure must be expanded, and the associated costs must also be reduced. Costs, supply chain constraints, logistics, project timing, and permitting present barriers to significant near-term hydrogen use. Further, if existing CTs were to co-fire hydrogen, these CTs might have to conduct major modifications to be able to accommodate hydrogen combustion. This adds additional costs and project requirements, including permitting, which could take a minimum of 10-18 months.

Hydrogen co-fired with natural gas has safety considerations. The gas turbine enclosure and ventilation system must be designed to maintain the hydrogen concentration outside its upper and lower explosive limits. Hazardous gas and flame detection systems configured for typical hydrocarbon fuels may need to be supplemented with systems capable of detecting hydrogen. Hydrogen storage may be difficult due to its extremely low volumetric density and extremely flammable properties. All these qualities combined make the logistics and transportation of hydrogen challenging.

C. Hybrid (Batteries Paired with CTs)

The experience integrating battery technology with CTs is limited.[13] CTs and batteries are designed to meet different purposes. CTs run as a dispatchable resource and do not run when they are not needed to generate electricity for the grid. Batteries are better paired with solar or wind generation because they are intermittent resources and run regardless of whether there is demand on the grid for their energy. Using a simple cycle CT to charge a battery would require the CT to overproduce when power is

[12] KCBPU 2024 IRP at 5-43.
[13] *See* APPA Comments May 2024 Nonrulemaking Docket at 11.

not needed just to store the surplus in a battery. Many utilities would find this approach uneconomical. Further, battery storage on a CT would not reduce CO_2 emissions because the CT must run more to charge the battery. In addition, each time the energy is converted from the CT to be stored in the battery and vice-versa, a loss of energy occurs. This energy loss equates to even more greenhouse gas emissions per megawatt used. Indeed, the direct energy conversion loss does not even account for other indirect environmental and carbon costs such as the energy used to manufacture the battery storage unit or the costs to dispose of the spent battery. Regardless of these impacts, on a purely legal basis, integrating these other technologies (e.g., batteries, solar, fuel cells) with CTs would be akin to "generation shifting," which is not a permissible basis for setting the BSER as the U.S. Supreme Court held in *West Virginia v. U.S. EPA*, 597 U.S. 697, 720 (2022).[14] Therefore, APPA supports evaluating BSER at the individual regulated source.

D. Efficiency Improvements as BSER

Some heat rate improvements may have been adequately demonstrated under some circumstances for existing CTs that improve a unit's efficiency and emission rates. These projects should be established as BSER, with requirements appropriate to the operation of the CT. CT operational differences may be dictated by the CT's load duty (i.e., base load, intermediate load, and peaking operation), rated capacity, commercial operation date, controls, or equipment type (such as duct burning, inlet air cooling, fogging). Heat rate improvement projects might include:

- Combustor upgrades
- Compressor section upgrades
- Combustion turbine section upgrades (hot gas path)
- Steam turbine upgrades (combined cycle units only)

III. GHG CT Rule Subcategorization is essential to flexibility.

APPA supports a CT GHG Rule that provides tailored standards to ensure that a broad range of unit designs can comply. Subcategorization is a critical mechanism to achieve this goal for CTs, as heterogenous group. These subcategories will allow EPA to devise durable emissions guidelines that CTs can achieve as performance evolves.

CTs come in varying sizes, technologies (simple cycle vs. combined cycle), uses (baseload vs. peaking) and ages—dramatically affecting emission reduction capabilities. Turbine equipment manufacturers are steadily making improvements that promote efficient, lower emitting combustion, resulting in better heat rates.[15] However, older CTs have an important role in grid stability and renewable support and should comply with limitations commensurate with their capabilities. In addition, the future rule framework

[14] The Court held that generation shifting could not be a basis of BSER. Congress did not delegate to the EPA the authority to "devise carbon emission caps based on a generation shifting approach." *Id.* at 732.
[15] ASME, Energy Blog: Gas Power Plants are Efficiency Giants, November 29, 2023.

should allow CTs to move between subcategories to allow for fluidity as the grid changes or the role of a CT evolves.

EPA should evaluate options for subcategorization based on the following:

- Size and Capacity: Differently sized CTs have varying emissions profiles. Emissions reduction strategies may also diverge. Larger turbines may have different emissions profiles and technological requirements compared to smaller turbines. APPA observes that subcategorizing units based solely on capacity may present problems because modern combined cycle units may be larger and more efficient than smaller-capacity simple cycle units. Modern, combined cycle natural gas plants have improved flexibility, allowing them to provide load-following operations and also be capable of supporting renewables as a separate role from providing baseload power.
- Technology: Subcategorizing based on technology would help to tailor standards to the principal turbine technology and controls at issue.
- Age: Older turbines may have different emission reduction potential and feasibility for implementing advanced technologies compared to newer models. It is well documented that CTs have evolved in efficiency over time. Therefore, a vintage-2000 turbine may not have the same ability to perform as efficiently as a turbine 20 years its junior. Using age as a consideration will help the future rule offer tailored, cost-effective requirements. Yet, APPA opposes subcategorization as a tool to sunset these units. The forced retirement of an older CT before the end of its remaining useful life would create a reliability gap for no appreciable environmental outcome. Many older CTs run infrequently, thereby emitting very little. These characteristics should be factored into EPA's subcategorization decisions.
- Fuel Type: CTs may be subcategorized based on the fuel-type combusted, such as hydrogen, natural gas, diesel, or other fossil fuels. Different fuels may require different emission control technologies or affect the achievable emissions limitation. Therefore, subcategorizing based on fuel type may be suitable for identifying the most appropriate emission reduction strategies for each category.
- Operating Conditions: CTs may also be subcategorized by operating conditions or unit utilization. Subcategorization should take into account CTs that are operated at low capacity factors. These units serve an important role to gap-fill when called upon, yet substantial upgrades would not be sensible for these units. They are not high emitters, and they would not justify the cost of expensive controls. For these reasons, emissions limitations for low capacity factor units should be set at a feasible level (not too low), given the grid's continued reliance on these units and their low emissions. EPA should provide flexibility and allow for "optional" exemptions to certain requirements for low-capacity units, similar to the Low Mass Emitter (LME) methodology under 40 CFR Part 75. The compliance requirements should be structured with on- and off-ramps to these exemptions, in case the dispatch profile of a

unit changes over time, as opposed to federally-enforced operational limitations written in a legally binding document.

APPA offers an example to underscore why subcategorization is crucial. Our member, Marshfield Utilities, operates a 60.5 MW gas peaking plant. The plant is limited to a 10% capacity factor, and the actual capacity factor is around 2% each year. Since the plant runs so infrequently, recouping costs associated with any potential emission reduction upgrade would be difficult. These costs could not be practically wrapped into the MW price bid into the market because a higher bid would only further reduce the unit's runtime. In any event, such a small gas peaking unit that operates so minimally has only de minimis emissions, which should be considered. The capacity this plant offers as a ready, reliable resource is invaluable. Subcategorization would help to preserve CTs of this type, which are important to the communities they serve.

IV. State Plan Compliance Flexibility is a Fundamental Need for Public Power.

APPA urges EPA to offer a suite of compliance flexibilities from which states can choose for their CAA Section 111 state plans. Each state is faced with unique energy needs and circumstances, given the varying unit types, load growth challenges, reliability considerations, coordination with grid operators, future retirements (and potential shortfalls), and state-specific regulations. With these options, states can better develop a more successful, resilient plan.

APPA suggests consideration of the following flexible alternatives in state plans:

- Phased-implementation: States should be allowed to offer implementation in phases. Phased implementation will alleviate the compliance burdens that public power already faces. The power sector is facing compliance deadlines between now and 2030 for the Final GHG Rule, Mercury and Air Toxics Rule (MATS), coal combustion residuals legacy rule, and effluent limitations guidelines. Overlaying another set of requirements on CTs super-sizes the burden on public power. Phased implementation would offer more time for project development, financing, and installation of any required new controls. The Acid Rain program is a tangible example of success.[16] It was implemented in two phases, five years apart.[17] In any case, compliance dates for subcategories should be set after the near-term deadlines for other rules so as not to place a further strain on the power sector. Phased implementation should begin no earlier than 2032 for CTs, which is the first retirement date under 40 CFR Part 60 Subpart UUUUb for exempt existing coal-fired units.
- Implementation considering grid reliability: States should be able to factor local and state-wide grid reliability factors into state plans. For instance, off-ramps for grid reliability considerations should be available. APPA highlights

[16] *See* 42 U.S.C. § 7651.
[17] *Id.*

the reliability provision in the Final GHG Rule, which offers a short-term mechanism during system emergencies.[18] This type of mechanism is even more important for CTs, considering their role as fast start assets to place MWs on the grid to avoid collapse. State plans should be permitted to contain a similar or even more robust exemption.

- Mass-based compliance alternatives: Mass-based limitations enhance flexibility. A tonnage limitation can offer more compliance assurance due to ease of tracking tons as compared to a rate-based emission limitation, particularly for units that operate intermittently or seasonally. The Final GHG Rule includes a mass-based option, which is a proven strategy for emissions reductions.[19]
- Emissions averaging: States should be able to avail emissions averaging. Emissions averaging can help a multiple unit system with practical flexibility. Averaging can help to smooth out operational highs and lows that are inevitable in unit operation. It may also help plants that have a number of small CTs by providing a simple, elegant compliance solution versus compliance on an individual CT-basis. APPA also advocates for averaging to be used with mass-based emissions limitations, should EPA offer a mass-based compliance option.
- Rate-based or mass-based trading: States should have the option of developing either a rate-based or mass-based trading program. Trading can be a nimble solution that achieves significant emissions reductions. EPA offered this option to states in the Final GHG Rule.[20]

V. RULOF should be a clear and attainable pathway for CTs.

The CAA Section 111 mechanism of Remaining Useful Life and Other Factors (RULOF) is fundamental to the important function of CTs to maintain grid stability and complement renewables. This assorted subcategory of sizes, technologies, and functions is likely to have exceptional qualities that cannot be foreseen by EPA when evaluating an entire swath of sources. RULOF allows states to consider source-specific circumstances that warrant the application of a less stringent standard than EPA sets in the emissions guidelines. The state must show fundamental differences that make it unreasonable for the facility to achieve the degree of emission limitation required or to meet the EPA-prescribed compliance schedule.[21]

CAA Section 111(d) explicitly offers states the option to account for RULOF when setting emissions standards for individual existing units. EPA affirmed this authority in the recently finalized greenhouse gas guidelines for existing electric generating steam units. However, while EPA offered a RULOF pathway in the recently finalized emission guidelines, the EPA should provide clear guidance on how states should conduct a

[18] 89 Fed. Reg. 39798, 40052 (May 9, 2024).
[19] The Acid Rain Program and Cross-State Air Pollution Rule (CSAPR) are based on mass-based limitations. *See* CAA, Title IV; 40 CFR Part 97.
[20] 89 Fed. Reg. at 40055-56.
[21] 89 Fed. Reg. at 39962.

RULOF analysis in state plans that may choose to set performance standards for CTs. Notably, the RULOF approaches outlined by EPA are accessible during state plan development but are difficult to use when faced with adapting and changing circumstances. EPA should make RULOF less rigid and more accessible to states to allow for a variety of situations in which unit-specific standards and timelines may need modification. EPA should give states broad deference when reviewing and approving their plans for existing CTs. States may then pivot more quickly to address changing circumstances more effectively.

VI. Existing Combustion Turbines Subject to NESHAP Subpart YYYY.

As EPA notes in 2022, the Agency conducted an Information Collection Request (ICR) on existing CTs to gather emissions data for potential emissions of formaldehyde, hydrogen fluoride (HF), hydrogen chloride (HCl), and metals. Unfortunately, the emissions test data for HF and HCl were not adequate for standard setting due to complications of the test method used with respect to these species and detection limit concerns. Method 26/26A would produce more accurate and reliable results and additional testing for these species was necessary to evaluate potential emissions standards.

Emissions data for metals was also collected, but similar challenges were identified in the quality assurance/ quality control measurements and detection limits for these test results. EPA should assess the current state of knowledge on emissions of trace metals from CTs:

- The origin of trace metals in the CT exhaust stream has not been conclusively determined.
- No method of controlling emissions of trace metals from CTs has been identified. There are no distinguishable trends in trace metal emissions between CTs with and without control technology (SCR, oxidation catalyst, lean pre-mix, or steam/water injection).
- No correlation has been shown between the age or size of CTs and emission rates of trace metals.

Given the current lack of certainty, it would be premature for EPA to establish emission limits for trace metals from CTs. Establishing these limits would also further complicate the compliance strategies that will be necessary to adhere to future CO_2 emission guidelines and changes to the NSPS for existing CTs.

Thank you for considering these comments. The Association looks forward to working with the Agency as it develops this rulemaking. Should you have any questions regarding these comments, please contact Carolyn Slaughter (202-467-2900) or cslaughter@publicpower.org

Best regards,

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