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EPA Docket Center
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Attention: Docket ID No. EPA-HQ-OAR-2022-0723

**Northeast and Mid-Atlantic Power Sector Policy Forum
Comments to the U.S. Environmental Protection Agency**

The Georgetown Climate Center submits the following comments on behalf of the Northeast and Mid-Atlantic (NEMA) Power Sector Policy Forum, which brings together state officials from participating agencies in Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont, and is convened and facilitated by the Georgetown Climate Center.

The NEMA Forum developed these comments in response to the “Questions for Consideration” published by the U.S. Environmental Protection Agency (EPA). The comments are informed by discussions among Forum participants, but may not represent the views of any particular jurisdiction. We thank you for the opportunity to submit these comments and welcome future opportunities to provide input, including in reaction to specific EPA proposals as they are developed and released.

Our detailed comments are included below; in summary, they articulate the following overarching points:

- The states in the NEMA region have a great deal of experience reducing emissions from the power sector and have demonstrated that emissions can be reduced effectively and at low cost.
- There is support for strong standards of performance for existing coal-, oil- and natural gas-fired units that significantly reduce emissions from the sector.
- Significant reductions can be achieved using existing, demonstrated technology.
- Flexibility for states to achieve the emissions result required by the EPA-set standard of performance is beneficial, but only to the extent it does not dilute the effectiveness of the federal standards.

Introduction

The states in the NEMA region have long been leaders in the effort to decarbonize the electricity sector. This leadership has taken the form of numerous policies designed to reduce pollution from the power sector, including:

- The Regional Greenhouse Gas Initiative (RGGI). The Regional Greenhouse Gas Initiative is the nation’s first multistate effort to cap and reduce carbon dioxide emissions from power plants in participating jurisdictions. RGGI was launched in September 2008, with the first auction of emissions allowances, and the emissions cap went into effect January 1, 2009. RGGI currently has 12 participating states.¹ RGGI has been and is central to participating states when it comes to reducing carbon dioxide emissions from the power sector, both as a result of the emissions cap and the investments made by the states using RGGI allowance auction revenue.
- Energy efficiency policies and investments. The states in the NEMA region have also long been at the forefront in the development and implementation of effective end-use energy efficiency policies to reduce electricity demand and with it the need to run fossil-fuel-fired power plants to meet that demand.
- Renewable and clean electricity policies and investments. States in the region have also adopted strong renewable energy standards or clean electricity standards to increase the amount of clean and renewable electricity generation that is delivered to consumers. These policies are responsible for the first offshore wind power installations in the United States, in addition to onshore wind and solar installations. These policies have also successfully preserved existing zero-carbon nuclear plants.
- Conventional pollutant regulations. In addition to the efforts to reduce carbon pollution directly and promote an increase in renewable and clean electricity generation, states in the region have been on the vanguard of reducing conventional air pollution, including nitrogen oxides, sulfur dioxides, particulate matter, and mercury pollution.

It is against this backdrop of strong actions to control pollution from the power sector that the NEMA Power Sector Policy Forum approached EPA’s “Questions for Consideration.”

¹ Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia have all promulgated RGGI rules. Pennsylvania’s participation is currently on hold pending review of the Pennsylvania rule in state court.

The Questions for Consideration

On September 8, 2022, EPA opened a non-rulemaking docket entitled “Reducing Greenhouse Gas Emissions from New and Existing Fossil Fuel-Fired Electric Generating Units.”² According to the memo authorizing the docket, EPA intends to accept comments from a “broad group of stakeholders” through March 27, 2023.³ The NEMA Forum provides responses to some of the questions posed by EPA below.

1. In both the Affordable Clean Energy (ACE) rule and Clean Power Plan (CPP) proposals, EPA identified options for systems of emission reduction that included fuel-switching or co-firing; carbon capture, utilization, and storage (CCUS); and improvements in operating efficiency. We would welcome your input on whether EPA should consider these systems in developing proposed emission guidelines under Clean Air Act (CAA) section 111(d).
 - a. What are your views on the feasibility, cost, air pollution impacts, energy impacts, or other advantages and disadvantages of these systems?
 - b. Are there particular types or subcategories of electric generating units (EGUs) for which one or more of these systems would be particularly appropriate or inappropriate?
 - c. Are there particular conditions, criteria, or limitations that EPA should consider with respect to any of these systems to address climate, public health or environmental justice considerations?
 - d. Are there other systems EPA should be considering, as alternatives to or in conjunction with these systems?

EPA’s first question for consideration focuses on elements of the “standard of performance” for existing power plants and specifically mentions fuel-switching or co-firing; carbon capture, utilization and storage (CCUS); and improvements in operating efficiency as possible “best system of emissions reductions” for existing plants. Section 111(a) of the Clean Air Act defines “standard of performance” to mean

“A standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air-quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.”

- The NEMA Forum supports strong standards of performance for existing coal-, oil- and natural gas-fired units that significantly reduce emissions from the sector, as well as separate standards by technology type to the extent separate standards lead to deeper overall emissions reductions.

² Environmental Protection Agency, EPA-HQ-OAR-2022-0723, “Reducing Greenhouse Gas Emissions from New and Existing Fossil Fuel-Fired Electric Generating Units” <https://www.regulations.gov/docket/EPA-HQ-OAR-2022-0723/document>.

³ Memorandum from Environmental Protection Agency on Posting EPA-HQ-OAR-2022-0723 to Regulations.gov for Public Access (Sept. 1, 2022) <https://downloads.regulations.gov/EPA-HQ-OAR-2022-0723-0001/content.pdf>.

- Fuel-switching to lower or zero-carbon fuels or co-firing with lower or zero-carbon fuels is an adequately demonstrated approach to reducing emissions at plants that currently burn higher-carbon fuels. We note that the recently passed Inflation Reduction Act (IRA), as well as the Bipartisan Infrastructure Law (BIL), provide financial assistance to producers of low- and zero-carbon hydrogen that should make hydrogen a lower cost, low-carbon option for co-firing in existing plants. EPA should consider low-carbon and zero-carbon (e.g., green or pink) hydrogen as it considers what fuel-switching or co-firing may be considered in setting the standards for existing plants. The use of lower carbon fuels must reduce carbon emissions while also controlling conventional pollutants.
- Hydrogen co-firing has been adequately demonstrated at existing gas-fired turbines. The New York Power Authority (NYPA) and the Electric Power Research Institute (EPRI) issued a report on NYPA’s pilot project co-firing hydrogen with blending between 5 and 44% by volume at its Brentwood simple-cycle combustion turbine on Long Island, New York.⁴
- The NEMA Forum urges EPA to set a standard that does not favor fuels that have high lifecycle emissions.
- Switching from coal to gas should include additional consideration of carbon capture and storage for the plant that has switched to natural gas or is co-firing natural gas.
- Carbon capture and storage has also been adequately demonstrated for deployment at existing coal and natural gas power plants. Recent passage of the Inflation Reduction Act offers plant owners significant incentives to lower the cost of carbon capture and storage. EPA should consider CCUS in setting the standard for existing coal-, oil- and gas-fired power plants.
- Operating efficiency improvements are also available at existing plants. EPA should consider operational efficiency improvements only to the extent those improvements result in a reduction of emissions at the plants.
- EPA should consider other potential options as “best systems of emissions reduction” beyond those referenced in the question. The addition of renewables sited inside the fence line at a generation facility, with and without storage, should be considered as part of the standard-setting process, for example.⁵

⁴ EPRI’s report on the Brentwood pilot project is available on the EPRI website. See Low-Carbon Resources Initiative, Executive Summary: Hydrogen Cofiring Demonstration at New York Power Authority’s Brentwood Site: GE LM6000 Gas Turbine (Sept. 15, 2022) <https://www.epri.com/research/products/000000003002025166>.

⁵ For an example of a regulation that incorporates on-site renewables as a way to reduce emissions, see New York’s peaker plant rule at 6 NYCRR Subpart 227-3. In order to qualify under the New York rule, renewable generation must be under common control with the fossil unit, serve the same community and feed the same substation as the fossil unit. EPA provided examples of this approach in its white paper exploring available technologies for reducing emissions, issued April 21, 2022, available at Environmental Protection Agency, White Paper: Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from Combustion Turbine Electric Generating Units (last updated June 8, 2022) <https://www.epa.gov/stationary-sources-air-pollution/white-paper-available-and-emerging-technologies-reducing>

2. Standards under CAA section 111 have typically taken the form of a “rate-based” limit expressed in terms of a quantity of pollution per unit of product produced or per unit of energy consumed (for example, pound per kilowatt hour (lb/kWh) or pound per million British thermal units (lb/mmBtu)). What options should EPA be considering in expressing proposed limits on carbon dioxide (CO₂) from existing power plants?

EPA’s second question for consideration relates to the form of the standard.

- EPA should express the standard as a stringent rate-based limitation that can be applied at each individual unit, should a state wish to propose that approach in its state plan.
- The federal standard should be a rate-based standard, but states should have the ability to propose a mass-based approach in a state plan. Any mass-based approach by a state must take into account and adjust for planned retirements of existing plants, be updated from time to time to adjust for unplanned retirements, and be at least as stringent as the rate-based approach. To the extent EPA is prepared to accept a state plan that is mass-based, EPA should be clear on how such a plan can be shown by the state to be equivalent.

3. CAA section 111(d) gives states responsibility for designing state plans that establish, implement, and enforce standards of performance for CO₂ from existing power plants.

- a. What flexibilities should EPA offer to states with regard to designing such plans? How much time should an emission guideline provide for states to develop and submit plans to EPA?
- b. Can EPA allow states to design alternative forms of emission limitations (*e.g.*, state-wide emissions budgets) and what limitations, conditions, or criteria should EPA establish to ensure such plans are satisfactory?
- c. What requirements, guidance, or tools and resources can EPA provide to ensure state plans improve air quality and reduce emissions in communities with environmental justice concerns?
- d. CAA section 111(d) provides that states must be allowed to consider “remaining useful life and other factors” in developing state plans. What requirements or guidance should EPA provide with respect to how such factors can be considered in the context of CO₂ from existing power plants?

EPA’s third question relates to state flexibility to develop state plans. Section 111(d) of the Clean Air Act refers to the Administrator prescribing regulations

“which shall establish a procedure similar to that provided by section 110 of the Act under which each state shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant [that is not a criteria pollutant or a toxic pollutant regulated under section 112] and (B) provides for the implementation and enforcement of such standards of performance. Regulations of the Administrator under this paragraph shall permit the state in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.”

Section 110 of the Act is the provision that provides for state implementation plans to maintain or meet national ambient air quality standards. That section lists a wide range of possible approaches available to a state to achieve the air quality results and suggests that states have broad flexibility in carrying out their responsibilities under section 111(d).

- EPA should provide states with flexibility to achieve the emissions result required by the EPA-set standard of performance.
- Flexibility should not, however, be permitted to dilute the environmental outcome. EPA's regulations must ensure that each and every state plan achieves an equivalent emissions result as applying the EPA-prescribed rate-based standard directly to each individual plant without flexibility.
- So long as it does not dilute the environmental outcome, EPA should consider accepting state plans that allow pollution sources to utilize creative ways to reduce their emissions rate, including through installation of renewables and storage to reduce emissions in a real, additional, verifiable, and enforceable manner. EPA should provide states the flexibility to allow sources to site these renewables offsite, provided the offsite capacity is nearby and serves the same area as the fossil unit.
- Flexibility should not be used to extend the life of a less-efficient, higher-emitting unit beyond when it otherwise would retire, unless extending the life has the effect of reducing emissions.
- As EPA considers the requirements applicable to state plans, EPA should carry out a meaningful dialogue with states to arrive at the most environmentally protective requirements that also address state concerns.
- As with EPA's standards of performance, EPA should ensure that state plans take into account the concerns of frontline communities where existing power plants are located. Any flexibility in the way a state implements the federal standards must be protective of these communities.

Thank you for the opportunity to file these comments. The NEMA Power Sector Policy Forum looks forward to providing additional input during subsequent rulemaking phases.

Sincerely,



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