IER INSTITUTE FOR ENERGY RESEARCH®

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Honorable Michael Regan Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004

Re: Proposed Rule, Environmental Protection Agency; New Source Performance Standards for Greenhouse Gas Emissions 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. 33,240-33,420, May 23, 2023)

1. Energy Reliability Concerns

Reliability is of tantamount importance to any plan impacting power production. This rule does not properly take into account the essentiality of reliability in our power system. Combined, coal and natural gas are responsible for nearly 60 percent of United States power production, while coal alone accounts for 19.5%.[1] To write off the majority of coal production, and a large portion of gas production by the 2030s (If the hydrogen and CCS pathways are not followed by all or most facilities), would create significant disruptions to the power system, and require rapid advancement of replacement capacity. Baseload capacity is necessary for reliable power performance, and the lead times on power plants capable of replacing this capacity on the grid are long.

In a May hearing of the U.S. Senate Energy and Natural Resources Committee on the oversight of the Federal Energy Regulatory Commission, all four commissioners agreed to the ongoing need for Coal power generation to sustain grid reliability. All four commissioners agreed as to the present necessity of coal to reliability.

The EPA regulatory impact assessment for this rulemaking is 359 pages long. The word reliability appears just twice in the body of the text, and neither time is it accompanied by any numerically backed explanation of how reliability would be stewarded through this change.[2]

[1] EIA, What is U.S. electricity generation by energy source?, https://www.eia.gov/tools/faqs/faq.php?id=427&t=3

[2] EPA, Regulatory Impact Analysis for the Proposed New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating

a. Failure to account for the impact of concurrent rulemakings

During the same period that this rule, which will phase out many base load generating coal and gas units was made, EPA issued another proposed rule on Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles. This rule, published on May 5th, 2023, would create far more stringent emissions standards for vehicles, driving reliance on electric vehicles. As more EVs enter the U.S. car fleet, demand that was once met by gasoline will require electricity to satisfy it instead. This rule is clearly of relevance to a plan that would result in the closure of power plants, but was not considered in the rulemaking,

2. Technological infeasibility of reliance on Carbon Capture and Sequestration

In the EPA Regulatory Impact Analysis for this rule, it states that the rule seeks, " to reduce the significant quantity of GHG emissions from new and existing fossil fuel-fired EGUs by establishing new source performance standards (NSPS) and emission guidelines that are based on available and cost-effective technologies that directly reduce GHG emissions from these sources."[3] The two phrases here that stick out are "available" and "cost-effective". The technologies these phrases are describing are "highly efficient generating practices, hydrogen co-firing, and CCS", but an outsized reliance is placed on Carbon Capture and Sequestration. This analysis will focus on the issues with CCS technology for so broad a mandate.

For certain coal-fired steam generating units, the more stringent NSPS requires 90 percent CCS in 2030 for all units, while the less stringent scenario lowers the requirement to 40 percent for units under 700 MW and plants under 2,000 MW. Either of these options requires a level of CCS that is presently neither "available" or "cost effective".

Regarding the usage of CCS technologies a U.N. Panel said in May that, "Engineering-based removal activities are technologically and economically unproven, especially at scale, and pose unknown environmental and social risks," a plan of this scope relying on a technology that is as of yet unproven at scale is irresponsible.[4]

Units; and Repeal of the Affordable Clean Energy Rule, https://www.epa.gov/system/files/documents/2023-05/utilities_ria_proposal_2023-05.pdf

[3] EPA, Regulatory Impact Analysis for the Proposed New Source Performance Standards for Greenhouse Gas Emissions 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, https://www.epa.gov/system/files/documents/2023-05/utilities_ria_proposal_2023-05.pdf

[4] Hiar, Corbin, U.N. slams carbon removal as unproven and risky, E&E News, May 24, 2023, https://www.eenews.net/articles/u-n-slams-carbon-removal-as-unproven-and-risky/

Currently, there is only one currently operating commercial power plant in North America that utilizes carbon capture, that is Boundary Dam Power Station Unit 3 in Canada. Not only that, but the carbon capture system, which cost $1.1 billion, is only able to capture 80 percent of the facility's carbon emissions—meaning it would fail to qualify under the rule.[5]

Further, the presentation of a costly, unproven technology as widely available and cost effective as the main means of retaining the right to operate a power plant creates a false choice. If the only way to keep coal fired, and some gas fired units online is to meet these carbon capture requirements, then the rule is very nearly a de facto requirement to close said facilities.

[5] Eric Niller, Carbon Capture Is Hard. This Plant Shows Why., May 12, 2023, https://www.wsj.com/articles/carbon-capture-is-hard-this-plant-shows-why-ce6e938c