

Proposed EPA Carbon Pollution Standards Would Impact Energy Sector

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On May 11, 2023, the Biden administration announced its long-anticipated [proposed greenhouse gas emission \(“GHG”\) standards](#) for new and existing fossil-fuel burning power plants (the “[Proposed Rule](#)”). In its [press release](#), the U.S. Environmental Protection Agency (“[EPA](#)”) stated that the Proposed Rule would reduce total carbon dioxide emissions by 617 million metric tons by 2042, as well as cutting tens of thousands of tons of other air pollutants, including particulate matter, sulfur dioxide, and nitrogen oxide. The EPA noted that the power sector in 2020 constituted the largest stationary source of GHG emissions in the U.S., emitting 25% of the overall domestic emissions. The EPA estimates that the Proposed Rule would result in an additional 42 gigawatts of coal plant retirements or nearly a quarter of existing coal-fired plants, by 2040. The EPA projects that within that same time frame, demand for natural gas from the power sector would fall by 37%.

The Proposed Rule would impose new source performance standards (“[NSPS](#)”) for GHG emissions from new fossil fuel-fired (primarily new natural gas-fired units) stationary combustion turbine electric generating units (“[EGUs](#)”) as well as emission guidelines for (i) large, frequently used existing stationary combustion engines (primarily natural gas-fired units, defined as those larger than 300 MW with a capacity factor of greater than 50%), and (ii) existing steam generating EGUs (primarily existing coal units). The EPA chose to focus the most restrictive standards on new gas-fired EGUs and existing fossil fuel-fired EGUs that are large and/or more frequently used and impose less stringent regulations on fossil fuel-fired EGUs that are smaller or are operational only occasionally (“[peaking units](#)”). Because no new coal plants have been built in the U.S. in over a decade and almost all the still-operational coal plants are facing retirement within the next few decades, the EPA decided to effectively grandfather all existing coal plants by imposing minimal requirements on those closing by 2040 and no new requirements (save the requirement to not increase their emissions rates) for those closing by 2032 or 2035.

It is clear that the EPA took care in crafting the Proposed Rule to fit within confines imposed by *West Virginia v. EPA* overturing previous attempts to regulate GHG emissions from the power sector by the Obama Administration. Further, in developing the Proposed Rule, the EPA conducted an environmental justice analysis consistent with guidance from the Council on Environmental Quality to engage with the overburdened communities disproportionately impacted by fossil fuel-fired power plants and ensure that the advancement of carbon capture, utilization, and sequestration technologies are done in a responsible manner that incorporates the input of communities and reflects the best available science. Whereas the Obama Administration took a novel approach by seeking to require states to meet GHG emissions targets and providing them with considerable flexibility to do so (which the Supreme Court ultimately found to exceed the regulatory mandate granted by Congress under the Clean Air Act), the Biden Administration has hewed more closely to traditional Clean Air Act requirements by requiring each emission source to meet specified standards.

As required by the Clean Air Act, Section 111, the Proposed Rule requires sources to implement the best system of emission reduction (“[BESR](#)”) that has been demonstrated to improve the GHG emissions performance of the sources (accounting for costs, energy requirements, and other factors, and considering a range of technologies). Although the Proposed Rule sets caps on pollution rates rather than mandating the use of specific equipment to capture carbon emissions, it is clear that the Proposed Rule heavily relies

on EPA's conclusion that the BESR for many power plants is carbon capture and sequestration ("CCS") technology that is not yet widely used. The Biden administration expressed confidence that this technology will become commercially available as a result of the new government incentives included in the Inflation Reduction Act that provide significant funding for emerging GHG-reduction technologies.

The EPA is also soliciting public comment on whether it should apply the Proposed Rule's requirements more broadly, including to natural gas-fired units as small as 100 megawatts and/or those that operate only 40% of the time.

NSPS for New EGUs (Natural Gas)

The EPA is proposing to create three new subcategories based on the function that the combustion turbine serves: (i) low load peaking units that consists of combustion turbines with a capacity factor of less than 20%, (ii) intermediate load that consists of combustion turbines with a capacity factor ranging between 20% and a source-specific upper bound that is based on the design efficiency of the combustion turbine, and (iii) a base load consisting of combustion turbines that operate above the upper-bound threshold for intermediate load turbines. For each subcategory, the EPA is proposing a distinct BESR and performance standards.

Emission Guidelines for Large and Frequently Used Existing Combustion EGUs (Natural Gas)

The EPA is proposing that the BESR for these units is based on either a 90% capture of carbon dioxide emissions using CCS by 2035, or co-firing of 30% by volume of low-GHG hydrogen beginning in 2032 and co-firing 96% by volume low-GHG hydrogen beginning in 2038.

Emission Guidelines for Existing Steam Generating EGUs (Coal)

The EPA has determined that CCS satisfies the BESR criteria for existing steam generating ESUs because it is adequately demonstrated, achieves significant GHG reductions, and is cost-effective. The cost-effectiveness depends on how long the units will remain operational, and therefore the EPA is proposing subcategories based on operating horizon: (i) for units that will permanently cease operations prior to January 1, 2040 and are not in other subcategories, the BESR will be co-firing 40% natural gas on a heat input basis (with a 16% reduction in emission rate), (ii) for units that will permanently cease operations prior to January 1, 2035 and commit to operating with an annual capacity factor limit of 20%, the BESR is routine methods of operations and maintenance (with no increases in emission rate), and (iii) for units that will permanently cease operations prior to January 1, 2032, the BESR is routine methods of operation and maintenance (with no increases in emission rate).

Standards for New, Reconstructed, and Modified Coal EGUs

The EPA noted that the 2015 standards for new coal units, based on CCS, and for reconstructed coal units, based on efficiency, remain in place. The EPA chose not to review the new and reconstructed standards because no new coal units have been constructed in the U.S. in over a decade, and the EPA does not anticipate any further new units. The EPA is proposing to revise the standards for modified coal units to be based on the BESR or CCS with 90% capture, to ensure consistency for any existing units currently subject to the emissions guidelines that may undergo modification and become subject to the NSPS for new EGUs.

Does the Proposed Rule Go Too Far, or Not Far Enough?

Arguments already abound that the Proposed Rule goes either too far, or not far enough. The Proposed Rule appears critical to the U.S. meeting its climate goals under the Paris Agreement to at least halve GHG emissions by the 2030. Environmental activists are concerned that the Proposed Rule exempts

too many natural gas EGUs and grandfathers coal units that will shut down before 2032 and would like to see the Proposed Rule expand to capture more EGUs. On the other hand, even before the Proposed Rule was released, Senator Joe Manchin, the Chair of the Senate Energy and Natural Resources Committee, [came out in opposition of the forthcoming rule](#) and stated that he would oppose Biden's current EPA nominees. Certainly, the finalized version of the Proposed Rule will become the subject of litigation, likely by many of the same Republican attorneys general who challenged the Obama-era Clean Power Plan.

The EPA will accept public comment on the Proposed Rule for 60 days after publication in the Federal Register, at Docket ID No. EPA-HQ-OAR-2023-0072. Affected lenders, owners, and operators of fossil fuel-fired EGUs, as well as any party investing in CCS, low-carbon hydrogen, or other green technologies, should track the progression of the Proposed Rule closely and consider the potential impacts of new carbon emissions regulations on their facilities' operations. If you have questions about the Proposed Rule or would like assistance in drafting comments, please reach out to us.

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