Biden-Harris Administration Finalizes Suite of Standards to Reduce Pollution from Fossil Fuel-Fired Power Plants

Four final rules deliver on the Biden-Harris Administration's day-one commitment to lead on climate action and to protect all communities from pollution

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WASHINGTON – Today, April 25, the U.S. Environmental Protection Agency announced a suite of final rules to reduce pollution from fossil fuel-fired power plants in order to protect all communities from pollution and improve public health without disrupting the delivery of reliable electricity. These rules, finalized under separate authorities including the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act, will significantly reduce climate, air, water, and land pollution from the power sector, delivering on the Biden-Harris Administration's commitment to protect public health, advance environmental justice, and confront the climate crisis.

By announcing these final rules at the same time, EPA is following through on the commitment that Administrator Michael S. Regan made to industry stakeholders at CERAWeek 2022 to provide regulatory certainty as the power sector makes long-term investments in the transition to a clean energy economy. The standards are designed to work with the power sector's planning processes, providing compliance timelines that enable power companies to plan in advance to meet electricity demand while reducing dangerous pollution.

"Today, EPA is proud to make good on the Biden-Harris Administration's vision to tackle climate change and to protect all communities from pollution in our air, water, and in our neighborhoods," **said EPA Administrator Michael S. Regan.** "By developing these standards in a clear, transparent, inclusive manner, EPA is cutting pollution while ensuring that power companies can make smart investments and continue to deliver reliable electricity for all Americans."

"This year, the United States is projected to build more new electric generation capacity than we have in two decades – and 96 percent of that will be clean," **said President Biden's National Climate Advisor Ali Zaidi.** "President Biden's leadership has not only sparked an unprecedented expansion in clean electricity generation, his leadership has also launched an American manufacturing renaissance. America is now a magnet for private investment, with hundreds of billions of dollars committed and 270,000 new clean energy jobs created. This is how we win the future, by harnessing new technologies to grow our economy, deliver environmental justice, and save the planet for future generations."

The suite of final rules includes:

- A final rule for existing coal-fired and new natural gas-fired power plants that would ensure that all coal-fired plants that plan to run in the long-term and all new baseload gas-fired plants control 90 percent of their carbon pollution.
- A final rule strengthening and updating the Mercury and Air Toxics Standards (MATS) for coal-fired power plants, tightening the emissions standard for toxic metals by 67 percent and finalizing a 70 percent reduction in the emissions standard for mercury from existing lignite-fired sources.

- A final rule to reduce pollutants discharged through wastewater from coal-fired power plants by more than 660 million pounds per year, ensuring cleaner water for affected communities, including communities with environmental justice concerns that are disproportionately impacted.
- A final rule that will require the safe management of coal ash that is placed in areas that were unregulated at the federal level until now, including at previously used disposal areas that may leak and contaminate groundwater.

Delivering Public Health Protections for Communities, Providing Regulatory Certainty for the Industry, and Ensuring the Power Sector Can Provide Reliable Electricity for Consumers

Finalizing these four rules delivers on the Administration's commitment to providing health protections for all communities, including communities with environmental justice concerns, many of which are located near power plants. At the same time, EPA is providing a predictable regulatory outlook for power companies, including opportunities to reduce compliance complexity, and clear signals to create market and price stability. Administrator Regan outlined this approach in 2022 when he committed to transparency and open dialogue so that state and federal energy regulators, power companies, and grid operators have clear information on which to base decisions.

EPA conducted regulatory impact analyses for each rule, showing that this suite of standards will deliver hundreds of billions of dollars in net benefits. EPA also performed a sensitivity analysis exploring the combined effect on the power sector of the carbon pollution, air toxics, and water rules, as well as EPA's recent rules for the transportation sector. The projections regarding changes in electricity supply and demand align with recent reports from the Department of Energy (DOE) and National Renewable Energy Laboratory and peer-reviewed research in showing that the sector can meet growing demand for electricity and provide reliable, affordable electricity at the same time as it reduces pollution in accordance with these rules to protect health and the planet.

With the announcement today, the power sector can make planning decisions with a full array of information. In fact, the agency's analysis indicates that issuing these rules at the same time is likely to create more efficiency for facilities that are now able to

evaluate compliance steps together rather than only for each rule in isolation. Therefore, adding the cost of the rules modeled independently would likely reflect an overestimate of total costs.

“The new rules to clean up air pollution from power plants are good news for everyone, especially if there is a power plant near where you work, live or study. The American Lung Association applauds Administrator Regan and the entire team of professionals at the EPA for their resolute commitment to public health and environmental justice,” **said Harold Wimmer, President and CEO of the American Lung Association.** “Burning fossil fuels in power plants harms people’s lungs, makes kids sick and accelerates the climate crisis. The stronger clean air and climate protections will save lives.”

“These rules call on utilities and states to be full partners in making this transition fair for energy workers and communities,” **said BlueGreen Alliance Executive Director Jason Walsh.** “It also complements the historic federal investments made by the Biden-Harris administration and the previous Congress, which provide a toolbox of critical investments targeted to the workers and communities experiencing the economic impacts of energy transition.”

Stronger Carbon Pollution Standards for New Gas and Existing Coal Power Plants

EPA’s final Clean Air Act standards for existing coal-fired and new natural gas-fired power plants limit the amount of carbon pollution covered sources can emit, based on proven and cost-effective control technologies that can be applied directly to power plants. The regulatory impact analysis projects reductions of 1.38 billion metric tons of carbon pollution overall through 2047, which is equivalent to preventing the annual emissions of 328 million gasoline cars, or to nearly an entire year of emissions from the entire U.S. electric power sector. It also projects up to $370 billion in climate and public health net benefits over the next two decades.

The rule addresses existing coal-fired power plants, which continue to be the largest source of greenhouse gas emissions from the power sector, and ensures that new natural gas combustion turbines, some of the largest new sources of greenhouse gases being built today, are designed using modern technologies to reduce climate pollution.

The climate and health benefits of this rule substantially outweigh the compliance costs. In 2035 alone, the regulatory impact analysis estimates substantial health co-benefits including:

- Up to 1,200 avoided premature deaths
- 870 avoided hospital and emergency room visits
- 1,900 avoided cases of asthma onset
- 360,000 avoided cases of asthma symptoms
- 48,000 avoided school absence days
- 57,000 lost workdays

The final emission standards and guidelines will achieve substantial reductions in carbon pollution at reasonable cost. The best system of emission reduction for the longest-running existing coal units and most heavily utilized new gas turbines is based on carbon capture and sequestration/storage (CCS) – an available and cost-reasonable emission control technology that can be applied directly to power plants and can reduce 90 percent of carbon dioxide emissions from the plants.

Lower costs and continued improvements in CCS technology, alongside tax incentives from President Biden's Inflation Reduction Act that allow companies to largely offset the cost of CCS, represent recent developments in emissions controls that informed EPA's determination of what is technically feasible and cost-reasonable. The Bipartisan Infrastructure Law also includes billions of dollars to advance and deploy CCS technology and infrastructure. EPA projects that the sector can comply with the standards with negligible impact on electricity prices, thanks to cost declines in CCS and other emissions-reducing technologies. EPA analysis also finds that power companies can comply with the standards while meeting grid reliability, even when considering increased load growth.

The final rule includes requirements to help ensure meaningful engagement with affected stakeholders, including communities with environmental justice concerns, overburdened by pollution and climate change impacts, as well as the energy communities and workers who have powered our nation for generations. The standard also requires states to provide transparent data on compliance pathways and timelines through the state planning process, ensuring that workers and communities have the best-available information to plan for changes in the sector. President Biden's

Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization has identified historic resources for energy communities to invest in infrastructure, deploy new technologies that can help clean up the electric power sector, support energy workers, and spur long-term economic revitalization. The final rule also follows guidance from the Council on Environmental Quality to ensure that deployment of CCS technologies is done in a responsible manner that incorporates the input of communities and reflects the best available science.

In addition to finalizing these rules, EPA has opened a non-regulatory docket and issued framing questions to gather input about a comprehensive approach to reduce GHG emissions from the entire fleet of existing gas combustion turbines in the power sector. EPA is committed to expeditiously proposing GHG emission guidelines for these units, as part of a comprehensive approach to the regulation of climate, toxic and air pollution from combustion turbines.

To view the fact sheet for this rulemaking visit EPA's Greenhouse Gas Standards and Guidelines for Fossil Fuel-Fired Power Plants <https://epa.gov/stationary-sources-air-pollution/greenhouse-gas-standards-and-guidelines-fossil-fuel-fired-power> webpage.

Strengthening Mercury and Air Toxics Standards

EPA is strengthening and updating the Mercury and Air Toxics Standards (MATS) for coal-fired power plants, achieving important hazardous air pollutant (HAP) emissions reductions and ensuring that the standards reflect the latest advancement in pollution control technologies. This final rule under the Clean Air Act is the most significant update since MATS was first issued in February 2012, building on highly successful and cost-effective protections.

EPA projects the final rule will reduce emissions of mercury and non-mercury metal HAPs, such as nickel, arsenic, and lead. Controlling these emissions from power plants improves public health for all Americans by reducing the risk of fatal heart attacks, cancer, developmental delays in children, and also reduces adverse environmental impacts. The final rule will also result in substantial co-benefits, including reductions in emissions of fine particulate matter ("soot"), sulfur dioxide, nitrogen oxides, and carbon dioxide nationwide. These public health improvements are especially important for children and communities with environmental justice concerns and others who regularly consume fish that accumulate high levels of pollutants from power plants.

The final rule reduces the mercury emissions limit by 70 percent for lignite-fired units and reduces the emissions limit that controls for toxic metals by 67 percent for all coal plants—while also requiring the use of continuous emission monitoring systems to provide real-time, accurate data to regulators, facility operators, and the public to ensure that plants are meeting these lower limits and that communities are protected year-round from pollution exposure.

EPA projects that the final MATS limits will result in the following emissions reductions in the year 2028:

- 1,000 pounds of mercury
- At least 7 tons of non-mercury HAP metals
- 770 tons of fine particulate matter (PM2.5)
- 280 tons of nitrogen oxides (NOx)
- 65,000 tons of carbon dioxide (CO2)

EPA's final rule projects $300 million in health benefits and $130 million in climate benefits over the 10-year period from 2028-2037. Reductions in non-mercury HAP metal emissions are expected to reduce exposure to carcinogens such as nickel, arsenic, and hexavalent chromium, for residents living in the vicinity of these facilities.

To view the fact sheet for this rulemaking visit EPA's Mercury and Air Toxics Standards <https://epa.gov/stationary-sources-air-pollution/mercury-and-air-toxics-standards> webpage.

Stronger Limits on Water Pollution from Power Plants

EPA is strengthening wastewater discharge standards that apply to coal-fired power plants, finalizing a rule that follows the latest science and applies EPA's longstanding authority under the Clean Water Act to reduce discharges of toxic metals and other pollutants from these power plants into lakes, streams, and other waterbodies. When implemented, this action will annually prevent more than 660 million pounds of pollution per year from being discharged to our nation's waters—protecting freshwater resources that provide sources of drinking water for communities, support economic development, enhance outdoor recreation, and sustain vibrant ecosystems.

Power plants that burn coal to create electricity use large volumes of water. When this water is returned to lakes, streams, and other waterbodies it can carry pollutants, including mercury, arsenic, selenium, nickel, bromide, chloride, and iodide, and nutrient pollution. Exposure to these pollutants can harm people and ecosystems by contaminating drinking water sources, recreational waters, and aquatic life.

EPA's final rule establishes technology-based discharge standards—known as Effluent Limitation Guidelines (ELGs)—that will apply to four types of wastewater:

- Flue gas desulfurization wastewater
- Bottom ash transport water
- Combustion residual leachate
- "Legacy wastewater" that is stored in surface impoundments (for example, coal ash ponds)

The agency's final rule includes implementation flexibilities for power plants. For example, the final rule creates a new compliance path for electricity generating units that permanently stop burning coal by 2034. These units will be able to continue meeting existing requirements instead of the requirements contained in this final regulation. In a separate action finalized last year, EPA updated but maintained an existing provision allowing units to comply with less stringent standards if they will permanently stop burning coal by 2028.

Following rigorous analysis, EPA has determined that this final rule will have minimal effects on electricity prices. EPA's analysis shows that the final rule will provide billions of dollars in health and environmental benefits each year. These water quality, health, and environmental improvements will benefit environmental justice communities that are disproportionately affected by pollution from coal-fired power plants.

To view the fact sheet for this rulemaking visit EPA's Steam Electric Power Generating Effluent Guidelines <https://epa.gov/eg/steam-electric-power-generating-effluent-guidelines> webpage.

Latest Action to Protect Communities from Coal Ash Contamination

Under the Resource Conservation and Recovery Act, EPA is finalizing a rule to protect communities and hold polluters accountable for controlling and cleaning up the contamination created by the disposal of coal combustion residuals (CCR or coal ash), which can cause serious public health risks. The agency is finalizing regulations that require the safe management of coal ash at inactive surface impoundments at inactive power plants and historical coal ash disposal areas.

Coal ash is a byproduct of burning coal in power plants that, without proper management, can pollute waterways, groundwater, drinking water, and the air. Coal ash contains contaminants like mercury, cadmium, chromium, and arsenic which are associated with cancer and various other serious health effects. EPA's final rule expands protections for the communities and ecosystems near active and inactive coal burning power plants, ensuring that groundwater contamination, surface water contamination, fugitive dust, floods and impoundment overflows, and threats to wildlife are all addressed.

Inactive coal ash surface impoundments at inactive facilities, referred to as "legacy CCR surface impoundments," are more likely to be unlined and unmonitored, making them more prone to leaks and structural problems than units at facilities that are currently in service. To address these concerns, EPA established safeguards for legacy coal ash surface impoundments that largely mirror those for inactive impoundments at active facilities, including requiring the proper closure of the impoundments and remediating coal ash contamination in groundwater. EPA analysis shows the final rule will reduce existing disproportionate and adverse effects on communities with environmental justice concerns.

In addition, through implementation of the 2015 CCR rule, EPA found "historic" disposal units that are leaking and contaminating groundwater at currently regulated power plants, but which were exempt under the original 2015 regulations. These are areas where coal ash was placed directly on the land, such as coal ash in surface impoundments and landfills that closed prior to the effective date of the 2015 CCR Rule and inactive CCR landfills. This final rule extends a subset of EPA's existing CCR requirements to these historic disposal units that will ensure any contamination from these areas is remediated, and will prevent further contamination. These requirements will apply to all active CCR facilities and inactive facilities with legacy CCR surface impoundments.

EPA does not expect this rule to affect the current operations of power plants, and therefore anticipates no impacts to electricity generation or grid reliability. This rule reflects the Administration's commitment to reduce pollution from the power sector while providing long-term regulatory certainty and operational flexibility.

To view the fact sheet for this rulemaking visit EPA's Legacy Coal Combustion Residuals Surface Impoundments and CCR Management Units <https://epa.gov/coalash/proposed-changes-legacy-coal-combustion-residuals-surface-impoundments-and-ccr-management> webpage.

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