

FACT SHEET

# CURBING POWER PLANT CARBON POLLUTION UNDER THE CLEAN AIR ACT

The Environmental Protection Agency (EPA) has the authority and responsibility to limit carbon pollution from power plants under Section 111 of the Clean Air Act. Power plants are the nation's second-largest carbon-polluting sector (after transportation), and carbon pollution standards can significantly reduce plant emissions. Current market trends and Inflation Reduction Act tax incentives to reduce the cost of pollution-reduction technology applicable to the power sector are alone likely to produce a roughly 67 percent reduction in emissions by 2030 (Figure 1) relative to 2005 levels.<sup>1</sup> We can do better. **NRDC modeling projects that with ambitious but achievable EPA carbon pollution standards, the power sector can reach a 73 percent reduction in carbon dioxide emissions by 2030.**<sup>2</sup> This fact sheet provides an overview of the standards EPA proposed in May 2023 and NRDC's recommendations to strengthen them.



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EPA's proposed standards cover **existing coal plants and new and existing gas plants**; new coal plants are already covered by earlier standards. They build on a transition to cleaner energy already being driven by market forces. States and companies will be able to meet these standards at minimal cost to households with substantial flexibility and lead time for implementation.<sup>3</sup> The standards are legally sound: EPA is following the Supreme Court's decision in *West Virginia v. EPA* (2022) by proposing standards that will "cause regulated sources to operate more cleanly" and will "improve the pollution performance of individual sources."<sup>4</sup>

Under the Clean Air Act, EPA sets the emissions performance levels that sources must meet based on the "best system of emission reduction." EPA's proposed emissions limits are based on the capabilities of carbon capture and sequestration (CCS) and clean hydrogen technologies.<sup>5</sup> Companies are not required to use these specific technologies and have broad flexibility to adopt other strategies that achieve the same emissions reductions.

Final standards are expected in April 2024 and will apply directly to new gas units. For existing coal and gas plants, states have two years to develop their own state plans that achieve equivalent emissions reductions (or face an EPA-imposed federal plan). EPA has a year to review and approve or reject each plan.

The EPA emissions limits are graduated depending on how long a specific power plant is going to operate or how heavily it will be used.<sup>6</sup>

## NRDC SEES OPPORTUNITIES TO STRENGTHEN THESE STANDARDS

According to recent NRDC modeling submitted in comments to EPA, if the agency makes these ambitious but achievable changes to the proposed standards, it can double the annual emissions reductions achieved from these rules by 2030.<sup>7</sup>

## EPA CARBON POLLUTION STANDARDS

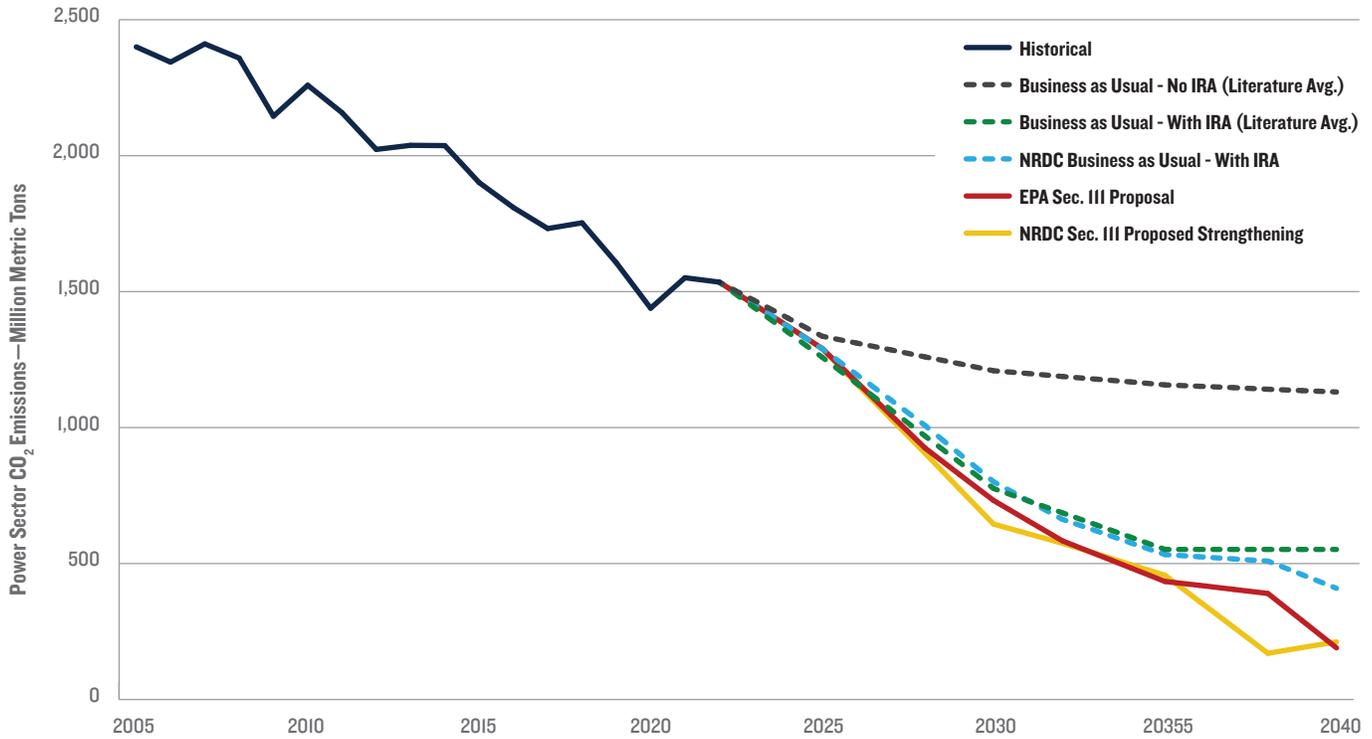
**Existing Coal Plants:** For the longest-running coal plants—those that companies plan to operate past January 2040—EPA is proposing an emissions limit that reduces emissions by 90 percent relative to the unit's baseline gross carbon emissions by 2030, based on the capability of CCS. The agency proposes less stringent limits for units that commit to retire at various dates before 2040.

**New Gas Plants:** The proposal divides new gas units into subcategories based on how often the unit will operate (i.e., the unit's capacity factor). For the units that will run most often, EPA proposes a 90 percent emissions reduction based on CCS. The proposal offers an alternative pathway based on burning a mixture of 30 percent clean hydrogen by volume and 70 percent gas by 2032; that fraction rises to 96 percent clean hydrogen by volume by 2038. Less stringent standards are proposed for units that will run less frequently.

**Existing Gas Plants:** EPA proposes a 90 percent emissions reduction based on CCS for the largest and most frequently used existing gas units—those that are 300 megawatts or larger and run more than 50 percent of the time. It offers an alternative pathway to compliance by co-firing 30 percent clean hydrogen by volume by 2032 and co-firing 96 percent clean hydrogen by volume by 2038.

- Proposed EPA standards currently cover existing individual gas generating units. **NRDC instead recommends applying the standards on a plant-wide basis rather than to individual units.** Many high-emitting gas plants are composed of multiple generating units.<sup>8</sup> Because multiple units at the same site can be connected to a single CCS unit, applying the standard on a plant-wide basis makes the most economic and logistical sense. NRDC recommends that CCS-based emissions limits apply to gas-fired units located in plants with total gas-fired capacity above 600 megawatts and a plant-wide capacity factor of more than 45 percent.
- **NRDC also recommends accelerating the proposed compliance timelines.** For example, the current EPA proposal does not require many power plants to make any reduction in emission rates before 2032. These lead times are overly generous and do not reflect the importance of addressing pollution quickly or the capabilities of the power sector to do so. NRDC modeling shows that EPA can move up compliance timelines without affecting costs or reliability.
- **NRDC supports vigorous action across EPA's authorities to protect communities from disproportionate cumulative risk from the operation of power plants and other facilities that are located near one another.** For plants that adopt carbon capture, EPA must provide for rigorous accounting of emissions and leaks from the point of capture to the point of permanent storage, including enforcement against any violations. In tandem, EPA and the Biden administration should also update regulatory safeguards for pipelines and underground storage to ensure that they do not harm communities nearby.

**FIGURE I: PROJECTED U.S. POWER SECTOR EMISSIONS UNDER VARIOUS SCENARIOS<sup>9</sup>**



**ENDNOTES**

- 1 NRDC and Clean Air Task Force (hereinafter CATF), comments regarding *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*, August 8, 2023, <https://www.nrdc.org/sites/default/files/2023-08/comments-epa-power-plant-rule-nrdc-catf-20230808.pdf>.
- 2 NRDC and CATF, *New Source Performance Standards*.
- 3 U.S. Environmental Protection Agency (hereinafter EPA), “Integrated Proposal Modeling and Updated Baseline Analysis,” July 7, 2023, <https://www.epa.gov/system/files/documents/2023-07/Integrated%20Proposal%20Modeling%20and%20Updated%20Baseline%20Analysis.pdf>.
- 4 EPA, *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, 33,269–70 (May 23, 2023), <https://www.govinfo.gov/content/pkg/FR-2023-05-23/pdf/2023-10141.pdf> (quoting *West Virginia*, 142 S.Ct. at 2610, 2614).
- 5 *Ibid.*, 33,243.
- 6 *Ibid.*, 33,284, 33,359–60.
- 7 NRDC and CATF, comments on *New Source Performance Standards*.
- 8 *Ibid.*
- 9 EPA, “Continuous Emissions Monitoring System,” Clean Air Markets Program Data, accessed October 18, 2023, <https://campd.epa.gov/data/custom-data-download>; John Bistline et al., “Emissions and Energy Impacts of the Inflation Reduction Act,” *Science* 380, no. 6652 (June 29, 2023): 1324–27, <https://www.science.org/doi/10.1126/science.adg3781>; and NRDC and CATF, comments on *New Source Performance Standards*.