

EPA Rule on GHG Emissions from Power Plants

On May 11, the U.S. Environmental Protection Agency (EPA) announced proposed standards for new and existing coal and natural gas-fired power plants. For the first time, natural gas units will be allowed to co-fire low-greenhouse gas (GHG) hydrogen to meet new emissions requirements.

EPA Provides Differing Requirements for Natural Gas and Coal Facilities

Natural Gas Facilities have different levels of requirements based on load factor

- **New Low Load** units with a capacity factor of less than 20% must reduce emissions with efficient generation.
- **New Intermediate Load** units with a capacity factor that ranges between 20%-40 % must immediately use efficient simple cycle generation. **By 2032, the facility must cofire with 30% low-greenhouse gas (GHG) hydrogen.**
- **New Base Load** units must immediately use efficient simple cycle generation. There are two pathways into the next phase. A facility can either use carbon capture and storage (CCS) technology to achieve a 90% carbon capture rate by 2035 **or co-firing of 30% (by volume) of low-GHG hydrogen by 2032, ramping up to 96% low-GHG hydrogen by 2038.**
- **Existing facilities** over 300MW and have a capacity of over 50% must meet the same pathway requirements as new base-load units allowing for either CCS with 90% capture rate by **2035 or co-firing of 30% low-GHG hydrogen by 2032 and 98% low-GHG hydrogen by 2038.**

Low-Greenhouse Gas Hydrogen Definition

EPA is setting a definition of low-GHG hydrogen based on carbon intensity which is aligned with the highest tier of the Section 45V Credit for Production of Clean Hydrogen at 0.45 kilogram CO₂ per 1 kilogram of hydrogen.

EPA is also using the same lifecycle analysis boundary conditions for low-GHG hydrogen of well-to-gate as consistent with the Congressional definitions provided in section 45V Credit for Production of Clean Hydrogen as detailed in the the Inflation Reduction Act of 2022.

Coal Facilities have differing requirements based on when they plan to cease operations

- Existing units planned to cease operations prior to January 1, 2032, will continue to follow routine methods of operation and maintenance so long as there is no increase in emission rate. This also applies to facilities planned to end operations prior to January 1, 2035 that will operate with an annual capacity factor of under 20%.
- Existing units planned to cease operations prior to January 1, 2040, must co-fire with 40% natural gas on a heat input basis.
- Existing units that will continue to be in operation after December 31, 2039, must capture 90% of carbon dioxide emissions using CCS.
- New coal-fired facilities will have to meet the existing 2015 emissions standards.