

BSER At-A-Glance

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FINAL CARBON POLLUTION STANDARDS FOR NEW AND EXISTING FOSSIL-FUEL FIRED ELECTRICITY GENERATORS			
Existing 111(d) Steam Generators		New Source and Reconstructed 111(b) Stationary Combustion Turbines	
Coal-Fired Boilers	Natural Gas and Oil-Fired Boilers	Phase I Date of promulgation or initial startup	Phase II Beginning in Jan 1, 2032
<p>Long-term subcategory: For units operating on or after January 1, 2039</p> <p>BSER: CCS with 90 percent capture of CO₂ (88.4% reduction in emission rate lb/MWh-gross) by January 1, 2032</p>	<p>BSER: routine methods of operation and maintenance with associated degree of emission limitation:</p> <p>Base load unit standard: (annual capacity factors greater than 45%) 1,400 lb CO₂/MWh-gross</p> <p>Intermediate load unit standard: (annual capacity factors greater than 8% and less than or equal to 45%) 1,600 lb CO₂/MWh-gross.</p> <p>Low load units: (annual capacity factors less than 8%) a uniform fuels BSER and a presumptive input-based standard of 170 lb CO₂/MMBtu for oil-fired sources and a presumptive standard of 130 lb CO₂/MMBtu for natural gas-fired sources.</p> <p>Compliance date of January 1, 2030</p>	Low Load Subcategory (Capacity Factor <20%)	
		<p>BSER: Use of lower emitting fuels (<i>e.g.</i>, hydrogen, natural gas and distillate oil)</p> <p>Standard: less than 160 lb CO₂/MMBtu</p>	EPA is not finalizing a Phase II BSER for low load units
<p>Medium-term subcategory: For units operating on or after Jan. 1, 2032, and demonstrating that they plan to permanently cease operating before January 1, 2039</p> <p>BSER: co-firing 40% (by heat input) natural gas with emission limitation of a 16% reduction in emission rate (lb CO₂/MWh-gross basis) by January 1, 2030</p>	<p>BSER: co-firing 40% (by heat input) natural gas with emission limitation of a 16% reduction in emission rate (lb CO₂/MWh-gross basis) by January 1, 2030</p>	Intermediate Load Subcategory (Capacity Factor 20% to 40%*) *Source-specific upper bound threshold based on EGU design efficiency	
		<p>BSER: Highly efficient simple cycle technology with best operating and maintenance practices</p> <p>Standard: 1,170 lb CO₂/MWh-gross</p>	EPA is not finalizing a Phase II BSER for intermediate load units
<p>For units demonstrating that they plan to permanently cease operating before January 1, 2032</p> <p>Units are exempt from the rule. Cease operations dates finalized in state plans for exemption purposes are federally enforceable.</p>	<p>For units demonstrating that they plan to permanently cease operating before January 1, 2032</p> <p>Units are exempt from the rule. Cease operations dates finalized in state plans for exemption purposes are federally enforceable.</p>	Base Load Subcategory (Capacity Factor >40%*) *Operation above upper-bound threshold for Intermediate Subcategory	
		<p>BSER: Highly efficient combined cycle generation with the best operating and maintenance practices</p> <p>Standard: 800 lb CO₂/MWh-gross (EGUs with a base load rating of 2,000 MMBtu/h or more)</p> <p>Standard: 800 to 900 lb CO₂/MWh-gross (EGUs with a base load rating of less than 2,000 MMBtu/h)</p>	<p>BSER: Continued highly efficient combined cycle generation with 90% CCS by Jan 1, 2032</p> <p>Standard: 100 lb CO₂/MWh-gross</p> <p>EPA's standard of performance is technology neutral, affected sources may comply with it by co-firing hydrogen.</p>
<p>For new and existing units installing control technologies, a 1-year extension is available in situations in which implementation delays are due to factors beyond the EGU owner/operator's control. For existing units with cease operations dates, a 1-year extension is available in situations in which the unit is needed for reliability through a reliability assurance mechanism, provided appropriate documentation is submitted.</p>			
<p>Major Modifications 111(b) Coal-fired Steam Generators: Standards of performance for coal-fired units that undertake a large modification (<i>i.e.</i>, increases hourly emission rate by more than 10%) mirror the emission guidelines for existing coal-fired steam generators.</p>			

Interested parties can download a copy of the final rule from EPA's website at [Greenhouse Gas Standards and Guidelines for Fossil Fuel-Fired Power Plants](#)