

Final BSER for new or reconstructed fossil fuel-fired stationary combustion turbines under section 111(b)

Phase I By date of promulgation or upon initial startup	Phase II Beginning in January 1, 2032
Low load subcategory (capacity factor <20%)	
<p>BSER: Use of low emitting fuels (e.g., natural gas and Nos. 1 or 2 fuel oils)</p> <p>Standard of performance: 160 lb CO₂/MMBtu or less</p>	EPA is not finalizing a Phase II BSER for low load combustion turbines.
Intermediate load subcategory (capacity factor 20% to 40%¹)	
<p>BSER: Highly efficient simple cycle technology with best operating and maintenance practices</p> <p>Standard of performance: 1,170 lb CO₂/MWh-gross</p>	EPA is not finalizing a Phase II BSER for intermediate load combustion turbines.
Base load subcategory (capacity factor >40%²)	
<p>BSER: Highly efficient combined cycle generation with best operating and maintenance practices</p> <p>Standard of performance:</p> <ul style="list-style-type: none"> • 800 lb CO₂/MWh-gross for units with a base load rating of 2,000 MMBtu/h or more • 800–900 lb CO₂/MWh-gross for units with a base load rating between 250³ and 2,000 MMBtu/h 	<p>BSER⁴: Continued highly efficient combined cycle generation with 90% CCS by January 1, 2032</p> <p>Standard of performance: 100 lb CO₂/MWh-gross</p>

¹ The upper bound is source-specific and is based on the design efficiency of the combustion turbine.

² The base load subcategory encompasses any combustion turbines that operate above the upper bound for the intermediate load subcategory.

³ Units below 250 MMBtu/h are not subject to the Final Rule.

⁴ While EPA proposed a BSER of co-firing low-GHG hydrogen, EPA is not finalizing this as a BSER pathway. However, EPA's standard of performance is technology neutral, meaning sources may comply with the performance standard by co-firing hydrogen.

Final BSER for existing fossil fuel-fired steam generating units under section 111(d)

Existing 111(d) steam generators	BSER	Emissions guideline / Presumptive performance standard
Coal-fired boilers⁵		
Long-term coal-fired units – units that will continue to operate on or after January 1, 2039	CCS with 90% capture of CO ₂	88.4% reduction in annual emission rate (lb CO ₂ /MWh-gross) from the unit-specific baseline by January 1, 2032
Medium-term coal-fired units – units that will operate on or after January 1, 2032 and demonstrate that they plan to permanently cease operations before January 1, 2039	Co-firing 40% (by heat input) natural gas	16% reduction in annual emission rate (lb CO ₂ /MWh-gross) from the unit-specific baseline by January 1, 2030
Units able to demonstrate plans to permanently cease operations before January 1, 2032 ⁶	Exempt from Final Rule	Exempt from Final Rule
Existing natural gas- and oil-fired steam generating units		
Base load subcategory (annual capacity factors >45%)	Routine methods of operation and maintenance	1,400 lb CO ₂ /MWh-gross by January 1, 2030
Intermediate load subcategory (annual capacity factors >8% and ≤45%)	Routine methods of operation and maintenance	1,600 lb CO ₂ /MWh-gross by January 1, 2030
Low load subcategory (annual capacity factors <8%)	Use of uniform fuels	170 lb CO ₂ /MMBtu for oil-fired sources by January 1, 2030 130 lb CO ₂ /MMBtu for natural gas-fired sources by January 1, 2030

⁵ The standards of performance for coal-fired units that undergo a major modification (i.e., increase hourly emission rate by more than 10%) before May 23, 2023 (the date the proposed version of the rule was published in the Federal Register) will be subject to the same standards as existing coal-fired boilers.

⁶ "Cease operation dates" finalized in any state plans are also federally enforceable for rule applicability exemption purposes.