

Fact Sheet

New Source Performance Standards for Stationary Combustion Turbines: Final Rule

Summary of Action

- On January 9, 2025, U.S. Environmental Protection Agency (EPA) finalized amendments to the New Source Performance Standards (NSPS) for Stationary Combustion Turbines and Stationary Gas Turbines. These amendments set standards of performance for emissions of the criteria air pollutants nitrogen oxide (NO_x) and sulfur dioxide (SO₂).
- This final action, issued under 40 CFR part 60, subpart KKKKa:
 - Establishes subcategories for new, modified, or reconstructed stationary combustion turbines.
 - Revises the NO_x standards of performance for certain subcategories of stationary combustion turbines to reflect the degree of emission limitation achievable based upon application of the best systems of emissions reduction (BSER).
 - Finalizes an additional subcategory for stationary temporary combustion turbines.
 - Maintains the current limits for SO₂ and finalizes flexibilities regarding when performance tests must be conducted after long periods of non-operation. Additionally, it allows owners and operators to use fuel records to comply with the applicable SO₂ standard.
- The agency estimates the final action will result in net annual NO_x emission reductions of up to 296 tons by 2032.
- The agency estimates cost savings for industry to be up to \$87 million over 8 years.
- The final NSPS covers facilities that commenced construction, modification, or reconstruction after December 13, 2024.
- Stationary combustion turbines subject to the final standards in subpart KKKKa are not subject to the requirements of the previous NSPS for this source category, 40 CFR part 60, subparts GG or KKKK.

Final Subcategories, BSER, And NO_x Standards for New, Modified, or Reconstructed Stationary Combustion Turbines

- In this action, EPA is establishing size-based subcategories for new, modified, or reconstructed stationary combustion turbines to reflect the base load rated heat input (measured in million British thermal units per hour (MMBtu/h)).
- This action further subdivides large and medium stationary combustion turbines by utilization level and large combustion turbines utilized at low levels by design efficiency.
- These additional subcategories are intended to capture and accommodate variations within certain classes of combustion turbines:
 - *To distinguish high- and low-utilization units:* EPA will consider the 12-calendar-month capacity factors (*i.e.*, the amount of actual heat input divided by the total possible heat input) of these turbines. The agency has determined a capacity factor threshold of 45 percent is appropriate to distinguish between low- and high-utilization turbines.

- To distinguish higher and lower efficiency units: EPA will use the manufacturers' design efficiency rating. The agency has set a threshold of 38 percent efficiency on a higher heating value (HHV) basis to distinguish between higher and lower efficiency turbines.
- EPA is finalizing the continued use of combustion controls as the BSER for limiting NO_x emissions from most subcategories of new, modified, or reconstructed turbines.
- EPA is finalizing a determination that the BSER for limiting NO_x emissions from new large combustion turbines with high utilization rates (*i.e.*, a 12-calendar-month capacity factor greater than 45 percent) is combustion controls with the addition of post-combustion selective catalytic reduction (SCR).

Subcategories, BSERs, and NO_x Limits for New Natural Gas-Fired Stationary Combustion Turbines

Size	Efficiency	Utilization	BSER	NO _x Standard ¹
Large (>850 MMBtu/h)	-	High	Combustion Controls + SCR	5 ppm
	≥ 38%	Low	Combustion Controls	25 ppm
	< 38%	Low	Combustion Controls	9 ppm
Medium (> 50 and ≤ 850 MMBtu/h)	-	High	Combustion Controls	15 ppm
	-	Low	Combustion Controls	25 ppm
Small (≤ 50 MMBtu/h)	-	Any	Combustion Controls	25 ppm

¹ Hourly emission standards are based on firing natural gas and hourly operations at greater than 70% of the base load rating. Separate standards exist when firing non-natural gas fuels and operating at part-loads.

- EPA is finalizing corresponding revisions to the NO_x standards for reconstructed or modified natural gas-fired stationary combustion turbines.

Subcategories, BSERs, and NO_x Limits for Modified or Reconstructed Natural Gas-Fired Stationary Combustion Turbines

Size ¹	Efficiency	BSER	NO _x Standard ²
Small (≤ 20 MMBtu/h) (electric generating)	All	Combustion Controls	42 ppm
Small (≤ 20 MMBtu/h) (mechanical drive)	All	Combustion Controls	100 ppm
Medium (> 20 and ≤ 850 MMBtu/h)	All	Combustion Controls	25 ppm
Large (≤ 850 MMBtu/h)	< 38%	Combustion Controls	15 ppm
	≥ 38%	Combustion Controls	25 ppm

¹ The subcategory thresholds relative to 20 MMBtu/h are different than the thresholds for these size subcategories for new units because one existing combustion turbine that is ≤ 20 MMBtu/h does not have available combustion controls that can meet the 42-ppm NO_x limit that would apply if it were to modify or reconstruct.

² Hourly emission standards are based on firing natural gas and hourly operations at greater than 70% of the base load rating. Separate standards exist when firing non-natural gas fuels and operating at part-loads.

Stationary Temporary Combustion Turbines

- EPA is finalizing an additional subcategory for stationary temporary combustion turbines, which applies to small and medium stationary combustion turbines (*i.e.*, up to 850 MMBtu/h) used in temporary applications.
- This final rule defines that a temporary combustion turbine that remains in place for longer than 24 months would not be considered temporary for any period of its operation, and any failure of the owner or operator to comply with the otherwise applicable requirements of the NSPS would be an enforceable violation of the CAA.
- EPA is including a provision in this NSPS that will allow portable combustion turbines regulated as title II-covered engines to be exempt from this NSPS as nonroad engines.
- The final NSPS does not allow the replacement of a temporary combustion turbine with another temporary combustion turbine to maintain temporary status beyond the 24-month period. However, temporary turbines may be used to replace or substitute the generation provided by non-temporary turbines (or other types of generators) when those units are taken offline (*e.g.*, for maintenance work).
- Under this final action, stationary temporary combustion turbines are subject to a BSER of combustion controls and a NO_x emission standard of 25 ppm when firing natural gas.
- In addition, monitoring, recordkeeping, and reporting requirements are substantially reduced for this subcategory; this will also streamline the permitting process, which could otherwise in some cases exceed the length of time temporary power generation is needed..
- However, EPA is requiring the owner or operator of a temporary combustion turbine to maintain on-site documentation that each unit has been certified by the manufacturer to meet a NO_x emissions rate of 25 ppm and has been performance tested at least once in the prior 5 years (for turbines older than 5 years, after the initial sale by the manufacturer).
 - Annual performance testing is not required for units in the temporary combustion turbine subcategory.

Economic Impact Analysis (EIA)

- The table below presents the net benefits of the rule for the analysis period 2025-2032. These net benefits include the costs associated with subcategories with increased stringency, and avoided costs associated with subcategories with decreased stringency (millions, 2024 dollars, discounted to 2024).

		3% Discount Rate		7% Discount Rate	
		PV ¹	EAV ²	PV ¹	EAV ²
Impacts associated with subcategories with increased stringency	Costs	\$19.4	\$2.77	\$15.5	\$2.59
Impacts associated with subcategories with decreased stringency	Avoided Costs	\$53.2 to \$106.4	\$7.58 to \$15.2	\$21.5 to \$43.0	\$3.60 to \$7.19
Net Costs		-\$87.0 to -\$33.8	-\$12.4 to -\$4.81	-\$27.5 to -\$5.98	-\$4.60 to -\$1.01

¹ The present values (PV) are the values over the period of 2025-2032.

² The equivalent annualized value (EAV) represents the value for each year of the analysis.

Background

- **Stationary combustion turbines** are located at power plants and at industrial sources, such as pipeline compressor stations, chemical and manufacturing plants, oil fields, landfills, and institutional facilities, among others. They are used to produce electricity and to drive heavy equipment such as compressors.
- **Temporary combustion turbines** are generally operated in short-term situations but can also provide power during emergencies (*e.g.*, natural disasters) while the primary generating equipment is not available, transmission and/or generation capacity is being repaired and/or upgraded, or for some unforeseen event.
- For source categories that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare, Clean Air Act (CAA) section 111 requires EPA to establish standards of performance for new sources.
 - EPA is also required to review and, if appropriate, revise, the standards every 8 years.
 - EPA last revised this NSPS on July 6, 2006, strengthening the NO_x and SO₂ standards.

For More Information

- Interested parties can download a copy of the final rule and fact sheet from EPA's website at the following address: <https://www.epa.gov/stationary-sources-air-pollution/stationary-gas-and-combustion-turbines-new-source-performance>.
- This action and other background information are also available online at Regulations.gov. Materials for this final action can be accessed using Docket ID No. EPA-HQ-OAR-2024-0419.