

EMISSIONS STANDARDS

VIETNAM



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The emission standards for Vietnam are set by the [Ministry of Natural Resources and Environment](#). Industrial sources of pollution were first regulated in 1995 and were most recently updated in 2009 by [QCVN 19: 2009/BTNMT](#), National Technical Regulation on Industrial Emission of Inorganic Substances and Dusts. Emission standards for power plants are covered separately by [QCVN 22: 2009/BTNMT](#), National Technical Regulation on Emissions from Thermal Power Industry.

Emission standards for thermal power plants

Emission standards for thermal power plants were released on 16 November 2009 and replaced the earlier 2005 standards. The regulations set limits for the emissions of particulate matter, sulphur dioxide, and nitrogen oxides from coal, natural gas, and oil-burning power plants. Unlike the emission standards for most countries, Vietnam's standards are based on the size of operation and location of the facility. The relevant emission standard for a pollutant is calculated using the following formula:

$$\text{Emission limit (mg/m}^3\text{)} = C \times K_p \times K_v$$

where:

C = the concentration parameter

K_p = the power plant size coefficient

K_v = the region coefficient.

Concentration parameters for coal-fired power plants

Pollutant	Concentration parameter, mg/m ³
Particulate matter	200
SO ₂	500
NO _x (as NO ₂)	650 with coal volatile content >10% 1000 with coal volatile content ≤10%

Reference conditions are 25°C at 101.3 kPa, dry basis, 15% O₂ concentration in exhaust gas.

Size coefficients for thermal power plants

Power plant size*, MW	K _p coefficient
≤300	1.0
>300 – ≤1200	0.85
>1200	0.7

* Total design capacity of the thermal power plant, which includes one or multiple units.

Region coefficients for thermal power plants

Zoning area	Kv coefficient
Cities, historic, cultural or natural heritage	0.6
Inner city and urban suburbs	0.8
Industrial zones, suburbs and outskirts	1.0
Rural	1.2
Rural mountains	1.4

Emission standards for industrial sources

Emission standards for industrial sources were released on 16 November 2009 and replaced the earlier 2005 standards. The regulation set limits for the emissions of particulate matter, sulphur dioxide, nitrogen oxides, and other pollutants. Unlike the emission standards for most countries, Vietnam's standards are based on the size of operation and location of the facility. The relevant emission standard for a pollutant is calculated using the following formula:

$$\text{Emission limit (mg/m}^3\text{)} = C \times K_p \times K_v$$

where:

C = the concentration parameter

K_p = the emission flowrate coefficient

K_v = the region coefficient.

Concentration parameters for industrial sources

Pollutant	Concentration parameter, mg/m ³
Particulate matter	200
SO ₂	500
NO _x (as NO ₂)	850
CO	1000

Reference conditions are 25°C at 101.3 kPa.

Emission flowrate coefficients for industrial sources

Emission flowrate, m ³ /h	K _p coefficient
≤20,000	1.0
>20,000 and ≤100,000	0.9
>100,000	0.8

Region coefficients for industrial sources

Zoning area	K _v coefficient
Cities, historic, cultural or natural heritage	0.6
Inner city and urban suburbs	0.8
Industrial zones, suburbs and outskirts	1.0
Rural	1.2
Rural mountains	1.4

This paper reflects the IEACCC understanding of the relevant legislation and is not a substitute for the official version. The IEACCC does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use.

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