

EMISSIONS STANDARDS

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The basis for environmental legislation in Kazakhstan is laid out by the [Environmental Code of the Republic of Kazakhstan](#), issued 9 January 2007 (no. 212). The emission limit values for thermal power plants are set by the Decree of the Government of the Republic of Kazakhstan, issued 14 December 2007 (no. 1232): [Requirements for emissions into environment from various fuels burning in the thermal power plant boilers](#). This Decree has since been amended by the Resolution dated [21 July 2010 \(no. 747\)](#).

In Kazakhstan, compliance with the air quality standards is monitored with the aim of maintaining pollution levels below the Maximum Allowable Concentrations in the nearest residential area to the industrial facility. Each industrial facility has a 'sanitary zone' surrounding it – the environmental authorities can adjust the emission limits of the industrial facility if the concentration of air pollutants at the boundary of this zone exceeds the Maximum Allowable Concentrations.

Technical specifications of emission standards for new boiler installations constructed after 1 January 2013

All of the following emission limit values are calculated at a temperature of 0°C and a pressure of 101.3 kPa. Those for SO_x and NO_x are on a dry gas basis. The limits are at an air excess ratio of 1.4.

Emission limit values for particulate matter

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 – <300	150 – 500
≥300 – <1180	100 – 200
≥1180	100 – 200

* Dependent on ash content of coal

Emission limit values for sulphur oxides (SO_x)

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 – <200	1200 – 1400
≥200 – <250	1800 – 2000
≥250 – <300	700
≥300	780

* Dependent on sulphur content of coal

Emission limit values for nitrogen oxides (NO_x)

Capacity, MW _{th}	Type of fuel	Emission limit values, mg/m ³
≥50 - <300	Lignite: solid slag	320
	Lignite: liquid slag	350
	Coal: solid slag	470
	Coal: liquid slag	640
≥300	Lignite	300
	Coal: solid slag	500
	Coal: liquid slag	550

Technical specifications of emission standards for existing plants renovated after 1 January 2013

All of the following emission limit values are calculated at a temperature of 0°C and a pressure of 101.3 kPa. Those for SO_x and NO_x are on a dry gas basis. The limits are at an air excess ratio of 1.4.

Emission limit values for particulate matter

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 - <300	670 - 870
≥300 - <1180	100 - 400
≥1180	400 - 600

* Dependent on ash content of coal

Emission limit values for sulphur oxides (SO_x)

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 - <300	2000 - 3400
≥300	2000 - 3000

* Dependent on sulphur content of coal

Emission limit values for nitrogen oxides (NO_x)

Capacity, MW _{th}	Type of fuel	Emission limit values, mg/m ³
≥50 – <300	Lignite: solid slag	500
	Lignite: liquid slag	550
	Coal: solid slag	570
	Coal: liquid slag	700
≥300	Lignite: solid slag	570
	Coal: solid slag	650
	Coal: liquid slag	800

Technical specifications for emission standards for existing plants prior to renovation

All of the following emission limit values are calculated at a temperature of 0°C and a pressure of 101.3 kPa. Those for SO_x and NO_x are on a dry gas basis. The limits are at an air excess ratio of 1.4.

Emission limit values for particulate matter

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 – <300	700 – 900
≥300 – <1180	600 – 1200
≥1180	1200 – 1600

* Dependent on ash content of coal

Emission limit values for sulphur oxides (SO_x)

Capacity, MW _{th}	Emission limit values*, mg/m ³
≥50 – <300	2000 – 3400
≥300	2000 – 3000

* Dependent on sulphur content of coal

Emission limit values for nitrogen oxides (NO_x)

Capacity, MW _{th}	Type of fuel	Emission limit values, mg/m ³
≥50 - <300	Lignite: solid slag	600
	Lignite: liquid slag	650
	Coal: solid slag	680
	Coal: liquid slag	850
≥300	Lignite: solid slag	600
	Coal: solid slag	850
	Coal: liquid slag	1050

Emission standards for carbon monoxide

The emission rate of carbon monoxide (CO) into the atmosphere from coal-fired boiler plants with an air excess ratio of 1.4 should not exceed:

400 mg/m³ for boilers with solid slag removal;

300 mg/m³ for boilers with liquid slag removal.

These limits are calculated at a temperature of 0°C and at a pressure of 101.3 kPa.

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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