



Turkey

The Turkish government published the first Environment Law (Law no. 2872) in the Official Gazette on 11 August 1983 (Resmî Gazete no. 18132, 11 August 1983, <http://www.resmigazete.gov.tr/main.aspx?home=http://www.resmigazete.gov.tr/arsiv/18132.pdf&main=http://www.resmigazete.gov.tr/arsiv/18132.pdf>). The purpose was to protect and improve the environment. The Law outlines Turkey's environmental policy in general terms and includes the polluter pays principle. It was amended in 2006 (Law no. 5491, in Resmî Gazete no. 26167, 13 May 2006, <http://www.hukukturk.com/en/official-gazette-of-tr?Sayi=26167>). Emission limits for air pollutants from industrial and power plant boilers greater than 1 MW were first established in 2004 (Resmî Gazete no. 25606, 7 Oct 2004). Over the years these have been amended and replaced. Turkey's air emission regulations and standards are gradually being harmonised with the relevant European Union's emission regulations and directives as part of the country's European Union accession agenda.

The Ministry of Environment and Urbanisation (T.C. Çevre ve Şehircilik Bakanlığı, <http://www.csb.gov.tr/>) has overall responsibility for emission standards. These can be downloaded from the website of the Directorate General of Environmental Management (Çevre Yönetimi Genel Müdürlüğü, <http://www.csb.gov.tr/gm/cygm/index.php?Sayfa=sayfa&Tur=webmenu&Id=266>). Emissions from combustion plants are covered in the *Regulation on the control of industrial air pollution* (Resmî Gazete no. 27277, 3 July 2009 and later amendments). The emission limits in the tables below are taken from the *Regulation on the control of industrial air pollution Annex 1*. The latest amendment, *The Implementing regulation on the amendment of the regulation on the control of industrial air pollution*, was published in the Official Gazette in December 2014 (Resmî Gazete no. 29211, 20 December 2014).

Emission limit values for large combustion plants

Large combustion plants cover installations with a rated thermal input of over 50 MW.

Particulate matter emission limits for existing plants

Plant size, MWth	Emission limit value*, mg/Nm ³
≥50 - <500	100
≥500	50

* A limit value of 100 mg/m³ may be applied to plants licensed prior to 1 June 1987 with a rated thermal input greater than or equal to 500 MW burning solid fuel with a heat content of less than 5800 kJ/kg (net calorific value), a moisture content greater than 45% by weight, a combined moisture and ash content greater than 60% by weight and a calcium oxide content greater than 10%.

Particulate matter emission limits for new plants

Plant size, MWth	Emission limit value, mg/Nm ³
≥50 - <100	50
≥100	30

SO₂ emission limits for existing plants

Plant size, MWth	Emission limit value*, mg/Nm ³
≥50 - <100	2000
≥100 - <500	2000 – 400 (linear decrease)
≥500	400

* 1. If the sulphur dioxide emission limits cannot be met due to the characteristics of the fuel, a desulphurisation rate of at least 60% must be met in the case of plants with a rated thermal input of greater than 50 MW and less than 100 MW, 75% for plants greater than or equal to 100 MW and less than 300 MW, 90% for plants greater than or equal to 300 MW and less than 500 MW, and 94% for plants greater than or equal to 500 MW. A desulphurisation rate of at least 92% applies to plants greater than or equal to 500 MW where a contract for the fitting of flue gas desulphurisation equipment had been entered into, and work on its installation had commenced, before 1 January 2006.

2. Plants with a rated thermal input equal to or greater than 400 MW which do not operate for more than 1500 hours a year (averaged over a period of five years), have to meet a sulphur dioxide emission limit of 800 mg/m³.

SO₂ emission limits for new plants

Plant size, MWth	Emission limit value*, mg/Nm ³
≥50 - <100	850
≥100	200

* If the sulphur dioxide emission limits cannot be met due to the high sulphur content of the fuel, then installations with a rated thermal input between 100 MW and 300 MW must meet a sulphur dioxide emission limit of 300 mg/Nm³ or a desulphurisation rate of at least 92%. For plants with a rated thermal input greater than or equal to 300 MW, the emission limit value is 400 mg/Nm³ and a desulphurisation rate of at least 95% must be met.

NO_x (NO and NO₂) emission limits for existing plants

Plant size, MWth	Emission limit value*, mg/Nm ³
≥50 - <500	600
≥500	200

* 1. From 1 January 2016, plants which do not operate for more than 1500 hours a year (averaged over a period of five years), are subject to a nitrogen dioxide emission limit of 450 mg/Nm³.

2. Until 1 January 2018, plants that in the 12 month period ending on 1 January 2005 that operate on, and continue to operate on, solid fuels with a volatile matter content of less than 10% have to meet a nitrogen dioxide emission limit of 1200 mg/Nm³.

NO₂ (NO and NO₂) emission limits for new plants

Plant size, MWth	Emission limit value*, mg/Nm ³
≥50 - <100	400
≥100	200

CO emission limits for existing plants

Plant size, MWth	Emission limit value, mg/Nm ³
≥50 - <500	200
≥500	200

CO emission limits for new plants

Plant size, MWth	Emission limit value, mg/Nm ³
≥50 - <100	150
≥100	200

Emission limits for combustion plants below 50 MW

The following emission limits apply to installations with a rated thermal input of less than 50 MW burning solid fuels.

Particulate matter emission limits

Plant size	Emission limit value, mg/Nm ³
>500 kW – ≤5 MWth	200
>5 – <50 MWth	150

SO₂ emission limits

Installations should avoid emitting sulphur dioxide (and sulphur trioxide). Those with a rated thermal input of less than 50 MW do not require a desulphurisation system if the sulphur dioxide (SO₂ and SO₃) emissions are below 2000 mg/Nm³. If the 2000 mg/Nm³ limit is exceeded (in plants <50 MWth), then SO₂ emissions must be reduced to 10% by applying a sulphur treatment process, which can be carried out before, during or after combustion. Combustion plants with a rated thermal input of 50 MW that do not meet the 2000 mg/Nm³ limit can be operated with sulphur reduction measures capable of maintaining a maximum sulphur emission limit of 10%.

NO_x emission limits

NO_x emissions should be reduced by technical measures such as reducing the flame temperature by recirculating the flue gas.

CO emission limits

Emissions of carbon monoxide should not exceed 200 mg/Nm³.

General notes:

1. For large combustion plants (greater than or equal to 50 MWth), existing plants are those established before 8 June 2010. For all other combustion plants, existing plants are those established before 3 July 2009.
2. New plants are any plants other than an existing plant.
3. All of the emission limit values are on the basis of 6% of O₂ in the flue gas.

This paper reflects the IEA CCC understanding of the relevant legislation and is not a substitute for the official version. The IEA CCC 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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