

Slovenia

The Environmental Protection Act (ZVO) was promulgated in 1993 and revised in 2004 to harmonise Slovenian laws with EU legislation. The revised ZVO-1(OJ RS, No. 41/04) came into force in May 2004 and was amended in 2006 (ZVO-1-UPB1, OJ RS, No. 39/06). Emission standards for air pollutants from combustion plants and other stationary sources were first laid down in 1994, and these have now been replaced by new standards that implement the EU directives on limitations of air pollutants emissions. The emission standards are now set for large combustion plants with rated thermal input of 50 MWth or greater (OJ RS No. 73/05, came into force on 1 Aug 2005), small and medium combustion plants (OJ RS No. 34/07, effective from 17 Apr 2007, and amended in Sep 2007) and stationary sources (OJ RS No. 31/07, in force since 6 Apr 2007, and amended in Jul 2008).

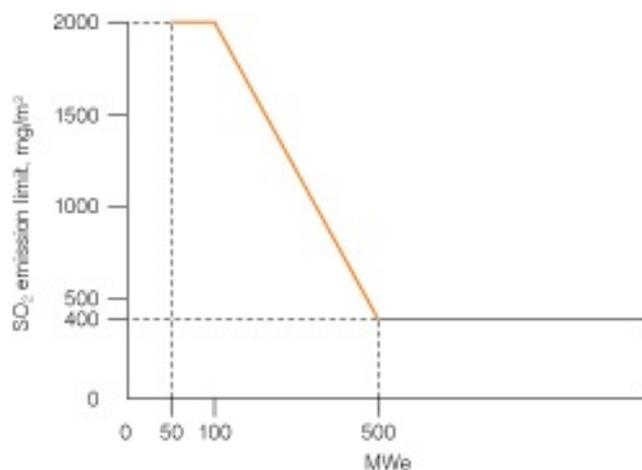
Emission standards for particulate matter from large coal-fired combustion plants

plant type	plant size, MWth	emission limit value, mg/m ³
existing and new plant	≥ 50 to < 500	100
	≥ 500	50
future new plant	≥ 50 to ≤ 100	50
	> 100	30

Note: Notwithstanding the above limits on emissions of particulate matter, a limit value of 100 mg/m³ can be applied to existing plants with a rated thermal input of 500 MWth or greater burning a coal with a lower heating value of less than 5800 kJ/kg, a moisture content above 45% by weight, a combination of moisture content and ash more than 60% by weight and a calcium oxide content exceeding 10% by weight.

Emission limit values for SO₂ from large coal-fired combustion plants

1. Emission limit values for existing and new plants



Note: 1. In the figure, emission limit values in the interval between 100 and 500 MWth is expressed as: $y = 2400 - 4x$

where:

x = the rated thermal input of a combustion plant in MWth;

y = the emission limit value for SO_2 in mg/m^3 .

2. Notwithstanding the above emission limit values, facilities with a rated thermal input of 400 MWth or greater, and do not operate more than 2000 hours a year until 31 Dec 2015, and do not operate more than 1500 hours a year from 1 January 2016 (rolling average over a period of five years), an emission limit value of $800 \text{ mg}/\text{m}^3$ may apply.

3. Where the emission limit values above cannot be met due to the characteristics of the fuel, a rate of desulphurisation of at least 60% shall be achieved in the case of plants with a rated thermal input of less than or equal to 100 MWth, at least 75% for plants greater than 100 MWth and less than or equal to 300 MWth and 90% for plants greater than 300 MWth and less than or equal to 500 MWth. For plants greater than 500 MWth, a desulphurisation rate of at least 94% shall apply or of at least 92% where a contract for the fitting of flue gas desulphurisation or lime injection equipment has been entered into, and work on its installation has commenced, before 1 Jan 2001.

2. Emission limit values for future new plants

plant size, MWth	emission limit value, mg/m^3
≥ 50 to ≤ 100	850
> 100 to ≤ 300	200
> 300	200

Note: Where the emission limit values above cannot be met due to the characteristics of the fuel, installations shall achieve $300 \text{ mg}/\text{m}^3 \text{ SO}_2$, or a rate of desulphurisation of at least 92% shall be achieved in the case of plants with a rated thermal input of less than or equal to 300 MWth and in the case of plants with a rated thermal input greater than 300 MWth a rate of desulphurisation of at least 95% together with a maximum permissible emission limit value of $400 \text{ mg}/\text{m}^3$ shall apply.

Emission limit values for NOx (expressed as NO₂) from large coal-fired combustion plants

plant type	plant size, MWth	emission limit value, mg/m ³
existing and new plant	≥ 50 to ≤ 500	600
	> 500	200
future new plant	≥ 50 to ≤ 100	400
	> 100 to ≤ 300	200
	> 300	200

Note: 1. Notwithstanding the above limits on emissions of NOx, until 31 Dec 2015 existing and new plants with a rated thermal input greater than 500 MWth may be subject to an emission limit value of

a) 500 mg/m³, or

b) 600 mg/m³ if from 1 Jan 2008 onwards the existing and new plants do not operate more than 2000 hours a year (rolling average over a period of five years).

From 1 Jan 2016, for existing and new plants greater than 500 MWth, which do not operate more than 1500 hours a year (rolling average over a period of five years), an emission limit value of 450 mg/m³ shall apply.

2. Notwithstanding the above limits on emissions of NOx, until 1 Jan 2018 existing and new plants that in the 12 month period prior to 1 Jan 2001 operated on, and continue to operate on, solid fuels whose volatile content is less than 10%, the emission value of 1200 mg/m³ shall apply.

Emission limit values for dust and sulphur oxides (expressed as SO₂) from medium coal-fired combustion plants

plant type	plant size, MWth	emission limit value, mg/m ³	
		dust	SOx (as SO ₂)
existing plant	> 1 to < 5	150	1700
	≥ 5 to < 50	50	1700
new plant	> 1 to < 5	50	1300*
	≥ 5 to < 50	20	1300*

* An ELV of 250 mg/m³ for SO₂ shall apply to facilities using the vortex layer combustion process. If such limit cannot be met through legitimate economic measures, the maximum emission factor, expressed as a ratio of the weight of sulphur in the waste gases and the mass of sulphur in fuel shall not exceed 25%.

Emission limit values for nitrogen oxides (expressed as NO₂) from small and medium coal-fired combustion plants

plant size, MWth	plant type	combustion process	emission limit value, mg/m ³
≥ 0.1 to ≤ 1			250
> 1 to < 50		vortex layer combustion	300
> 1 to < 10		combustion processes other than vortex layer combustion	500
≥ 10 to < 50			400
> 1 to < 50	existing plant		650

Note: Coal-fired facilities using vortex layer combustion process are subject to an ELV of 150 mg/m³ for N₂O.

- Note: 1. Existing large combustion plants refer to any large combustion plant, for which the construction licence was issued before 1 July 1987, or failing that, a large combustion plant that went into operation before 1 July 1987.
2. New large combustion plants refer to any large combustion plant, for which the construction licence was issued after 1 Jul 1987 but before 27 Nov 2002, or for a new heating plant for which the application for construction was made before 27 November 2002 and which began operation after 1 Jul 1987 and on or before 27 Nov 2003.
3. Future new large combustion plants refer to any large combustion plant, which obtained a construction licence after 27 Nov 2002, or a new heating plant for which the application for construction was made after 27 Nov 2002, and which began operation after 27 Nov 2003.
4. Existing small and medium combustion plants refer to heating plants that were built or operated, or failing that, the construction licence or environmental permit was granted on or before the date when this Regulation came into force.
5. ELVs for large combustion plants are expressed as at 0 °C, 101.325 kPa, and dry flue gas basis and with 6% O₂ in the flue gas. ELVs for small and medium combustion plants are expressed as at 0 °C, 101.325 kPa, and dry flue gas basis and with 7% O₂ in the flue gas.