

Values in mg/Nm ³ , Daily Average, 6% O ₂ . * CO figures are indicative yearly average emission levels; hpy: operating hours per year												
Fuel	Type of value	Legal Instrument	MW	Type		NO _x	SO ₂	CO* (existing ≥1500 hpy)	HCl	HF	Dust	Hg (µg/Nm ³)
Biomass	ELV	MCP	1–5		New	500	200				50	
Biomass	ELV	MCP	5–20		New	300	200				30	
Biomass	ELV	MCP	20–50		New	300	200				20	
Biomass	ELV	IED	50–100		New	250	200				20	
Biomass	ELV	IED	100–300		New	200	200				20	
Biomass	ELV	IED	≥300		New	150	150				20	
Biomass	ELV	MCP	1–5		Existing	650	200				50	
Biomass	ELV	MCP	5–20		Existing	650	200				50	
Biomass	ELV	MCP	20–50		Existing	650	200				30	
Biomass	ELV	IED	50–100		Existing	300	200				30	
Biomass	ELV	IED	100–300		Existing	250	200				20	
Biomass	ELV	IED	≥300		Existing	200	200				20	
Biomass	BATAEL	BREF	50–100		New	120–200	30–175	<30–250	1–12	<1	2–10	<1–5
Biomass	BATAEL	BREF	100–300		New	100–200	<20–85	<30–160	1–12	<1	2–10	<1–5
Biomass	BATAEL	BREF	≥300		New	65–150	<20–70	<30–80	1–12	<1	2–10	<1–5
Biomass	BATAEL	BREF	50–100		Existing	120–275	30–215	<30–250 (≥500 hpy)	1–35	<1.5	2–22	<1–5
Biomass	BATAEL	BREF	100–300		Existing	100–220	<20–175	<30–160	1–12	<1	2–18	<1–5
Biomass	BATAEL	BREF	≥300		Existing	95–165	<20–85	<30–80	1–12	<1	2–16	<1–5
Coal	ELV	MCP	1–5		New	500	400				50	
Coal	ELV	MCP	5–20		New	300	400				30	
Coal	ELV	MCP	20–50		New	300	400				20	
Coal	ELV	IED	50–100		New	300 (400 PL)	400				20	
Coal	ELV	IED	100–300		New	200	200				20	
Coal	ELV	IED	≥300		New	150 (200 PL)	150 (200 FB)				10	
Coal	ELV	MCP	1–5		Existing	650	1100				50	
Coal	ELV	MCP	5–20		Existing	650	1100				50	
Coal	ELV	MCP	20–50		Existing	650	400				30	
Coal	ELV	IED	50–100		Existing	300 (450 PL)	400				30	
Coal	ELV	IED	100–300		Existing	200	250				25	
Coal	ELV	IED	≥300		Existing	200	200				20	
Coal	BATAEL	BREF	50–100		New	155–200	170–220	<30–140	1–6	<1–3	4–16	Coal: <1–3; Lignite: <1–5
Coal	BATAEL	BREF	100–300		New	80–130	135–200	<30–140	1–3	<1–2	3–15	Coal: <1–3; Lignite: <1–5
Coal	BATAEL	BREF	≥300	FBC	New	80–125	25–110	<30–100	1–3	<1–2	3–10	Coal: <1–2; Lignite: <1–4
Coal	BATAEL	BREF	≥300	PC	New	80–125	25–110	<5–100	1–3	<1–2	3–10	Coal: <1–2; Lignite: <1–4
Coal	BATAEL	BREF	50–100		Existing	165–330	170–400	<30–140	2–10	<1–6	4–22	Coal: <1–9; Lignite: <1–10
Coal	BATAEL	BREF	100–300		Existing	155–210	135–220	<30–140	1–5	<1–3	4–22	Coal: <1–9; Lignite: <1–10
Coal	BATAEL	BREF	≥300	FBC	Existing	140–165	50–220	<30–100	1–5	<1–3	3–11	Coal: <1–4; Lignite: <1–7
Coal	BATAEL	BREF	≥300	PC	Existing	<85–165	25–165	<5–100	1–5	<1–3	3–11	Coal: <1–4; Lignite: <1–7

As of 30.11.2015. Notes for the values on this sheet:

These are the general legally-binding values. Many exceptions exist and are not listed here. Refer to the Reference pages below. Bear in mind that local permitting authorities may always ask stricter emission levels than those described here.

New and Existing:

MCP

Article 3 (6):

“‘existing combustion plant’ means a combustion plant put into operation before 20 December 2018 or for which a permit was granted before 19 December 2017 pursuant to national legislation provided that the plant is put into operation no later than 20 December 2018;”. All subsequent plants are considered “new”.

IED

Article 30.2 defines “existing” plants. “All permits for installations containing combustion plants which have been granted a permit before 7 January 2013, or the operators of which have submitted a complete application for a permit before that date, provided that such plants are put into operation no later than 7 January 2014, shall include conditions ensuring that emissions into air from these plants do not exceed the emission limit values set out in Part 1 of Annex V.” All subsequent plants are considered “new”.

LCP BREF

Definition of a new LCP is “A combustion plant first permitted at the installation following the publication of these BAT conclusions or a complete replacement of a combustion plant on the existing foundations following the publication of these BAT conclusions” The BAT Conclusions being still unpublished, the “new” date is still unknown (although expected to be early 2017). All other plants are considered existing, but many exemptions exist to the values in the EPPSA table.

BATAEL notes:

FBC: FBC boiler combusting coal and/or lignite and lignite-fired pulverised coal boiler

PC: coal-fired PC boiler

FB: in case of circulating or pressurised fluidised bed combustion

PL: Pulverised Lignite Combustion

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References LCP BREF

Coal

Table 10.3: BAT-associated emission levels (BAT-AELs) for NO_x , NH_3 and CO emissions to air from the combustion of coal and/or lignite

Combustion plant total rated thermal input (MW _{th})	BAT-AELs (mg/Nm ³)					Monitoring frequency	
	NO _x		CO		NH ₃		
	Yearly average		Daily average or average over the sampling period		Yearly average		
	New plants	Existing plants ⁽⁷⁾	New plants	Existing plants ⁽¹¹⁾	New or existing plant		
<100	100–150	100–270	ND 155–200	ND 165–330	10–140 100	<5	Continuous measurement
100–300	50–100	100–180	ND 80–130	ND 155–210	10–140 100	<5	
≥ 300 FBC boiler combusting coal and/or lignite (coal-lignite) and lignite-fired PC boiler ⁽⁸⁾ lignite firing	50–85 150	< 85–150 ⁽⁸⁾⁽⁹⁾	80–125	140–165 220 ⁽¹⁰⁾	12–5–100 ⁽⁷⁾ 80	<1–3–5	
≥ 300 coal-fired PC boiler ⁽⁹⁾ coal firing	65–85 100	65–150 180	80–125	< 85–165 220 ⁽⁶⁾⁽⁷⁾	1–5–100 ⁽⁷⁾ 55	<1–3–5	

⁽⁶⁾ Ammonia emissions are associated with the use of SCR and SNCR.

⁽⁷⁾ These BAT-AELs do not apply to ~~when combustion plants operated~~ < 1500 h/yr in peak or emergency load modes.

⁽⁸⁾ In the case of plants put into operation no later than 7 January 2014, operated in peak or emergency load modes, the higher end of the range is 200 mg/Nm³ for plants operated ≥ 1500 h/yr, and 220 mg/Nm³ for plants operated < 1500 h/yr.

⁽⁹⁾ The higher end of the BAT-AEL range can be as high as 140 mg/Nm³ in the case of limitations due to boiler design, and/or in the case of fluidised bed boilers not fitted with secondary abatement techniques for NO_x emissions reduction.

⁽¹⁰⁾ In the case of plants put into operation no later than 1st July 1987, which are operated < 1500 h/yr for which SCR and/or SNCR is not applicable, the higher end of the range is 340 mg/Nm³.

⁽¹¹⁾ The lower end of the range is considered achievable when using SCR.

⁽¹²⁾ The higher end of the range is 175 mg/Nm³ for lignite-fired FBC boilers put into operation no later than 7 January 2014.

⁽¹³⁾ The higher end of the range is 220 mg/Nm³ for lignite-fired FBC boilers put into operation no later than 7 January 2014.

⁽¹⁴⁾ These levels are indicative for ~~combustion plants operated~~ < 500 h/yr.

NB: NA = not applicable; ND = not determined

The associated monitoring is in BAT-3 ter.

As an indication, the yearly average CO emission levels for existing combustion plants operated ≥ 1500 h/yr, or for new combustion plants will generally be as follows:

Combustion plant total rated thermal input (MW_{th})	CO indicative emission level (mg/Nm^3)
< 300	< 30–140
≥ 300 , FBC boiler combusting coal and/or lignite and lignite-fired PC boiler	< 30–100 ⁽¹⁾
≥ 300 , coal-fired PC boiler	< 5–100 ⁽¹⁾
⁽¹⁾ The higher end of the range can be as high as $140 \text{ mg}/\text{Nm}^3$ in the case of limitations due to boiler design, and/or in the case of fluidised bed boilers not fitted with secondary abatement techniques for NO_x emissions reduction.	

BAT 20: In order to prevent or reduce N_2O emissions to air from the combustion of coal and lignite in circulating fluidised bed boilers, BAT is to apply BAT BAT 4 and the technique given below:

Technique	Description	Applicability
a Combustion temperature control	Control of the combustion temperature enables achieving balanced emissions to air of N_2O and NO_x	Generally applicable

{This BAT conclusion is based on information given in Section 5.1.4.6}

Table 10.5: BAT-associated emission levels (BAT-AELs) for SO_2 SO_x -emissions to air from the combustion of coal and/or lignite with S content < 3 %

Combustion plant total rated thermal input (MW_{th})	BAT-AELs (mg/Nm^3)				Monitoring frequency
	Yearly average		Daily average	Daily average or average over the sampling period	
	New plants	Existing plants ⁽¹⁾	New plants	Existing plants ⁽²⁾	
> 50–<100	150–200	150–360–400	ND–170–220	ND–170–400	Continuous measurement ⁽²⁾
100–300	80–150	95–200	ND–135–200	ND–135–220 ⁽³⁾	
≥ 300 (Pulverised combustion) PC boiler	10–75	10–130 ⁽⁴⁾	25–110	25–165–220 ⁽⁴⁾	
≥ 300 (Fluidised bed boilers) ⁽¹⁾	20–75	20–180	25–110	50–220	

⁽¹⁾ For circulating fluidised bed boilers, the lower end of the range can be achieved by using a high efficiency wet FGD-system. The higher end of the range can be achieved by using boiler in-bed sorbent injection.

⁽²⁾ SO_2 is continuously measured, while SO_x is only periodically measured (e.g. during calibration of the SO_2 monitoring system).

⁽³⁾ These BAT-AELs do not apply when to combustion plants operated < 1500 h/yr in peak or emergency load modes.

⁽⁴⁾ The higher end of the BAT-AEL range is $220 \text{ mg}/\text{Nm}^3$ in the case of plants put into operation no later than 7 January 2014 and operated < 1500 h/yr in peak or emergency load modes. For other existing plants put into operation no later than 7 January 2014, the higher end of the BAT-AEL range is $205 \text{ mg}/\text{Nm}^3$.

⁽⁵⁾ In the case of plants put into operation no later than 7 January 2014, the upper end of the BAT-AEL range is $250 \text{ mg}/\text{Nm}^3$.

⁽⁶⁾ The lower end of the range can be achieved when using low-sulphur fuel in combination with a wet abatement system.

⁽⁷⁾ These levels are indicative for combustion plants operated < 500 h/yr.

NB: NA = No BAT-AEL

Table 10.6: BAT-associated emission levels (BAT-AELs) for HCl and HF emissions to air from the combustion of coal and/or lignite

Pollutant	Combustion plant total rated thermal input	BAT-AELs (mg/Nm ³)		Monitoring frequency
		Average of samples obtained during one year		
	(MW _{th})	BAT-AELs (average of samples obtained during one year— mg/Nm ³) New plant	BAT-AELs (average of samples obtained during one year— mg/Nm ³) Existing plant ⁽¹⁾	
HCl	≥ 100	1–3 5	1–5 ^(2,3)	4 times/yr
	< 100	1–6 10	2–10 ⁽³⁾	
HF	≥ 100	< 1–2	< 1–3 2 ⁽³⁾	
	< 100	< 1–3	< 1–6 ⁽³⁾	

⁽¹⁾ The lower end of these BAT-AEL ranges may be difficult to achieve in the case of plants fitted with a wet FGD system and a downstream gas-gas heater.

⁽²⁾ In the case of CFB boilers, in the case of plants combusting fuels with a chlorine content of > 1000 mg/kg (dry), or in the case of plants operated < 1500 h/yr in peak or emergency load mode, the higher end of the range is 20 mg/Nm³.

⁽³⁾ In the case of plants operated < 1500 h/yr and in the case of CFB boilers or of plants fitted with a wet FGD system with a downstream gas-gas heater in peak or emergency load modes, the higher end of the BAT-AEL range is 7 mg/Nm³.

BAT-associated emission levels

The BAT-associated emission levels for dust emissions to air are given in Table 10.7.

The associated monitoring is given in BAT 3 ter.

Table 10.7: BAT-associated emission levels (BAT-AELs) for dust emissions to air from the combustion of coal and/or lignite

Combustion plant total rated thermal input (MW _{th})	Unit	BAT-AELs (mg/Nm ³)				Monitoring frequency
		Yearly average ⁽¹⁾		Daily average or average over the sampling period		
		New plants	Existing plants ⁽¹⁾	New plants	Existing plants ⁽¹⁾	
≥ 50 < 100	mg/Nm ³	2-5	2-18	4-16 ND	4-22 ⁽²⁾	Continuous measurement
100-300		2-5	2-14	3-15 ND	4-22 ⁽³⁾	
300-1000		≤ 2-5	1-2-10 ⁽⁴⁾	3-10 ND	4-3-11 ⁽⁵⁾	
≥ 1000		≤ 2-5-3	≤ 1-2-8	4-3-10	4-3-11 ⁽⁶⁾ 20	

⁽¹⁾ These BAT-AELs do not apply to ~~combustion~~ plants operated < 1500 h/yr. when plants operate in peak or emergency load modes.

⁽²⁾ The higher end of the BAT-AEL range is 28 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽³⁾ The higher end of the BAT-AEL range is 25 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁴⁾ The higher end of the BAT-AEL range is 12 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁵⁾ The higher end of the BAT-AEL range is 20 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁶⁾ The higher end of the BAT-AEL range is 14 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁷⁾ These levels are indicative for plants operated < 500 h/yr.

The associated monitoring is in BAT 3 ter.

Table 10.8: BAT-associated emission levels (BAT-AELs) for mercury emissions to air from the combustion of coal (anthracite and bituminous)

Combustion plant total rated thermal input (MW _{th})	BAT-AELs (µg/Nm ³) ⁽¹⁾		Averaging period	Monitoring frequency
	New plants	Existing plants		
< 300	0.5 < 1-3 ⁽²⁾	< 1-9 ⁽²⁾ 10	Average of samples obtained during one year	Periodic measurement four times/yr
≥ 300	0.2 < 1-2	0.2 < 1-4 ⁽²⁾ 6	Yearly average	Continuous measurement

⁽¹⁾ These BAT-AELs do not apply in the case of plants operated < 1500 h/yr.
⁽²⁾ The lower end of the BAT-AEL range can be achieved with specific mercury abatement techniques.

Table 10.9: BAT-associated emission levels (BAT-AELs) for mercury emissions to air from the combustion of sub-bituminous coal and lignite

Combustion plant total rated thermal input (MW _{th})	BAT-AELs (µg/Nm ³) ⁽¹⁾		Averaging period	Monitoring frequency
	New plants	Existing plants		
< 300	< 1-5 ⁽²⁾ 10	< 1-10 ⁽²⁾ 20	Average of samples obtained during one year	Periodic measurement times/yr
≥ 300	0.5 < 1-4.5	0.5 < 1-7 ⁽²⁾ 10	Yearly average	Continuous measurement

⁽¹⁾ These BAT-AELs do not apply in the case of plants operated < 1500 h/yr.
⁽²⁾ The lower end of the BAT-AEL range can be achieved with specific mercury abatement techniques.

Biomass

Combustion plant total rated thermal input (MW _{th})	BAT-AELs (mg/Nm ³)					Monitoring frequency
	NO _x				CO ⁽²⁾	
	Yearly average		Daily average or average over the sampling period		Yearly average	
	New plants	Existing plants ⁽³⁾	New plants	Existing plants ⁽⁴⁾	Yearly average	
50-100	70-150 ⁽⁵⁾	70-225 ⁽⁶⁾	120-200 ⁽⁷⁾	120-275 ⁽¹⁰⁾	4.20-250 ⁽⁸⁾	Continuous measurement
100-300	50-140 ⁽⁵⁾	50-180 ⁽⁶⁾	100-200 ⁽⁷⁾	100-220 ⁽⁹⁾	4.15-160 ⁽⁸⁾	
≥ 300	40-140 ⁽⁵⁾	40-150 ⁽⁶⁾	65-150 ⁽⁷⁾	95-165 ⁽⁹⁾	4.5-50-80 ⁽⁸⁾	

⁽¹⁾ Ammonia emissions are associated with the use of SCR and SNCR.

⁽²⁾ These BAT-AELs do not apply when to plants operated < 1500 h/yr in peak or emergency load modes.

⁽³⁾ The higher end of the BAT-AEL range is 310 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁴⁾ The higher end of the BAT-AEL range is 160 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁵⁾ The higher end of the BAT-AEL range is 200 mg/Nm³ for plants put into operation no later than 7 January 2014.

⁽⁶⁾ These levels are indicative for combustion plants operated < 500 h/yr.

⁽⁷⁾ For plants burning only high alkali fuels (> 2000 mg/kg of K (dry) and/or > 300 mg/kg of Na (dry)), the higher end of the BAT-AEL range is 200 mg/Nm³.

⁽⁸⁾ For plants burning only high alkali fuels (> 2000 mg/kg of K (dry) and/or > 300 mg/kg of Na (dry)), the higher end of the BAT-AEL range is 250 mg/Nm³.

⁽⁹⁾ For plants burning only high alkali fuels (> 2000 mg/kg of K (dry) and/or > 300 mg/kg of Na (dry)), the higher end of the BAT-AEL range is 260 mg/Nm³.

⁽¹⁰⁾ For plants burning only high alkali fuels (> 2000 mg/kg of K (dry) and/or > 300 mg/kg of Na (dry)) put into operation no later than 7 January 2014, the higher end of the BAT-AEL range is 310 mg/Nm³.

As an indication, the yearly average CO emission levels for:

- existing combustion plants of 50–100 MW_{th} operated ≥ 500 h/yr, or new combustion plants of ≤ 50 –100 MW_{th}, will generally be <30 –250 mg/Nm³;
- existing combustion plants of 100–300 MW_{th} operated ≥ 1500 h/yr, or new combustion plants of 100–300 MW_{th}, will generally be <30 –160 mg/Nm³;
- existing combustion plants of ≥ 300 MW_{th} operated ≥ 1500 h/yr, or new combustion plants of ≥ 300 MW_{th}, will generally be <30 –80 mg/Nm³.

Combustion plant total rated thermal input (MW _{th})	BAT-AELs for SO ₂ (mg/Nm ³) ⁽¹⁾			
	Yearly average		Daily average or average over the sampling period	
	New plant	Existing plant ⁽²⁾	New plant	Existing plant ⁽⁵⁾
< 100	15–70	15–100	30–175	30–215
100–300	<10–50	<10–70 ⁽³⁾	<20–85	<20–175 ⁽³⁾
≥ 300	<10–35	<10–50 ⁽³⁾	<20–70	<20–85 ⁽³⁾

⁽¹⁾ For existing plants burning fuels where the average sulphur content is 0.1 % or higher, the higher end of the BAT-AEL range for yearly average is 100 mg/Nm³ and the higher end of the BAT-AEL range for daily average is 215 mg/Nm³.

⁽²⁾ These BAT-AELs do not apply when to plants operated < 1500 h/yr in peak or emergency load modes.

⁽³⁾ For existing plants burning fuels where the average sulphur content is 0.1 % or higher, the higher end of the BAT-AEL range is 215 mg/Nm³.

⁽⁴⁾ For existing plants burning fuels where the average sulphur content is 0.1 % or higher, the higher end of the BAT-AEL range is 165 mg/Nm³, or 215 mg/Nm³ if those plants have been put into operation no later than 7 January 2014 and/or are FBC boilers combusting peat.

⁽⁵⁾ These levels are indicative for combustion plants operated < 500 h/yr.

Table 10.12-bis: BAT-associated emission levels (BAT-AELs) for HCl and HF emissions to air from the combustion of solid biomass and/or peat

Combustion plant total rated thermal input (MW _{th})	BAT-AELs for HCl (mg/Nm ³) ⁽¹⁾ ^(1bis)				BAT-AELs for HF (mg/Nm ³)	
	Yearly average or average of samples obtained during one year		Daily average or average over the sampling period		Average over the sampling period	
	New plant	Existing plant ⁽²⁾ ⁽³⁾	New plant	Existing plant ⁽⁴⁾	New plant	Existing plant ⁽⁴⁾ ⁽⁵⁾
< 100	1–7	1–15	1–12	1–35	< 1	< 1.5
100–300	1–5	1–9	1–12	1–12	< 1	< 1
≥ 300	1–5	1–5	1–12	1–12	< 1	< 1

⁽¹⁾ For existing plants burning 100 % high Cl content biomass such as straw, the higher end of the BAT-AEL range for yearly average is 20 mg/Nm³ and the higher end of the BAT-AEL range for daily average is 35 mg/Nm³.

^(1bis) For plants burning fuels where the average Cl content is ≥ 0.1 wt-% (dry), or for existing plants co-combusting biomass with sulphur-rich fuel (e.g. peat) or using alkali chloride-converting additives (e.g. elemental sulphur), or for plants with an average Cl content in the fuel of < 0.1 wt-% (dry) operated < 1500 h/yr, the higher end of the BAT-AEL range for the yearly average for new plants is 15 mg/Nm³, the higher end of the BAT-AEL range for the yearly average for existing plants is 25 mg/Nm³. The daily BAT-AEL range does not apply to these plants.

For existing plants with an average Cl content in the fuel of ≥ 0.1 wt-% (dry) operated < 1500 h/yr, the higher end of the BAT-AEL range for the yearly average is 50 mg/Nm³.

⁽²⁾ These BAT-AELs do not apply when to plants operated < 1500 h/yr in peak or emergency load modes.

⁽³⁾ The lower end of these BAT-AEL ranges may be difficult to achieve in the case of plants fitted with a wet FGD system and a downstream gas-gas heater.

⁽⁴⁾ In the case of plants operated in peak or emergency load modes, the BAT-AEL range is 0.01–1.3 mg/Nm³.

⁽⁵⁾ These levels are indicative for combustion plants operated < 500 h/yr.

Table 10.13: BAT-associated emission levels (BAT-AELs) for dust emissions to air from the combustion of solid biomass and/or peat

Type of plant	Pollutant	Unit	Monitoring frequency	BAT-AEL	
				Daily average	Yearly average
New	Dust	mg/Nm ³	Continuous measurement	2-12	<1-3
Existing				2-20	<1-10

Combustion plant total rated thermal input (MW _{th})	BAT-AELs for dust (mg/Nm ³)			
	Yearly average		Daily average or average over the sampling period	
	New plant	Existing plant ⁽¹⁾	New plant	Existing plant ⁽²⁾
< 100	2-5	2-15	2-10	2-22
100-300	2-5	2-12	2-10	2-18
≥ 300	2-5	2-10	2-10	2-16

⁽¹⁾ These BAT-AELs do not apply when to plants operated < 1500 h/yr in peak or emergency load modes.
⁽²⁾ These levels are indicative for combustion plants operated < 500 h/yr.

Table 10.14: BAT-associated emission levels (BAT-AELs) for mercury emissions to air from the combustion of solid biomass and/or peat

Pollutant	Unit	BAT-AELs for Hg ⁽¹⁾	Monitoring frequency
		Average of samples obtained during one year over the sampling period	
Mercury	µg/Nm ³	< 1-5	Periodic measurement 1 time/yr

⁽¹⁾ These BAT-AELs do not apply in the case of plants operated < 1500 h/yr.

References IED

PART 1

Emission limit values for combustion plants referred to in Article 30(2)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6 % for solid fuels, 3 % for combustion plants, other than gas turbines and gas engines using liquid and gaseous fuels and 15 % for gas turbines and gas engines.
2. Emission limit values (mg/Nm³) for SO₂ for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass	Peat	Liquid fuels
50-100	400	200	300	350
100-300	250	200	300	250
> 300	200	200	200	200

Combustion plants, using solid fuels which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for SO₂ of 800 mg/Nm³.

4. Emission limit values (mg/Nm³) for NO_x for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels
50-100	300 450 in case of pulverised lignite combustion	300	450
100-300	200	250	200 ⁽¹⁾
> 300	200	200	150 ⁽¹⁾

Note:

- ⁽¹⁾ The emission limit value is 450 mg/Nm³ for the firing of distillation and conversion residues from the refining of crude-oil for own consumption in combustion plants with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003.

Combustion plants in chemical installations using liquid production residues as non-commercial fuel for own consumption with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

Combustion plants using solid or liquid fuels with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

Combustion plants using solid fuels with a total rated thermal input greater than 500 MW, which were granted a permit before 1 July 1987 and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

7. Emission limit values (mg/Nm³) for dust for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels ⁽¹⁾
50-100	30	30	30
100-300	25	20	25
> 300	20	20	20

Note:

- ⁽¹⁾ The emission limit value is 50 mg/Nm³ for the firing of distillation and conversion residues from the refining of crude oil for own consumption in combustion plants which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003.

PART 2

Emission limit values for combustion plants referred to in Article 30(3)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6 % for solid fuels, 3 % for combustion plants other than gas turbines and gas engines using liquid and gaseous fuels and 15 % for gas turbines and gas engines.

In case of combined cycle gas turbines with supplementary firing, the standardised O₂ content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

2. Emission limit values (mg/Nm³) for SO₂ for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass	Peat	Liquid fuels
50-100	400	200	300	350
100-300	200	200	300 250 in case of fluidised bed combustion	200
> 300	150 200 in case of circulating or pressurised fluidised bed combustion	150	150 200 in case of fluidised bed combustion	150

4. Emission limit values (mg/Nm³) for NO_x for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels
50-100	300 400 in case of pulverised lignite combustion	250	300
100-300	200	200	150
> 300	150 200 in case of pulverised lignite combustion	150	100

7. Emission limit values (mg/Nm³) for dust for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	
50-300	20
> 300	10
	20 for biomass and peat

References MCPD

ANNEX II

EMISSION LIMIT VALUES REFERRED TO IN ARTICLE 6

All emission limit values set out in this Annex are defined at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6 % for medium combustion plants using solid fuels, 3 % for medium combustion plants, other than engines and gas turbines, using liquid and gaseous fuels and 15 % for engines and gas turbines.

PART 1

Emission limit values for existing medium combustion plants

Table 1

Emission limit values (mg/Nm³) for existing medium combustion plants with a rated thermal input equal to or greater than 1 MW and less than or equal to 5 MW, other than engines and gas turbines

Pollutant	Solid biomass	Other solid fuels	Gas oil	Liquid fuels other than gas oil	Natural gas	Gaseous fuels other than natural gas
SO ₂	200 ⁽¹⁾ ⁽²⁾	1 100	—	350	—	200 ⁽³⁾
NO _x	650	650	200	650	250	250
Dust	50	50	—	50	—	—

⁽¹⁾ The value does not apply in the case of plants firing exclusively woody solid biomass.

⁽²⁾ 300 mg/Nm³ in the case of plants firing straw.

⁽³⁾ 400 mg/Nm³ in the case of low calorific gases from coke ovens in the iron and steel industry.

Table 2

Emission limit values (mg/Nm³) for existing medium combustion plants with a rated thermal input greater than 5 MW, other than engines and gas turbines

Pollutant	Solid biomass	Other solid fuels	Gas oil	Liquid fuels other than gas oil	Natural gas	Gaseous fuels other than natural gas
SO ₂	200 ⁽¹⁾ ⁽²⁾	400 ⁽³⁾	—	350 ⁽⁴⁾	—	35 ⁽⁵⁾ ⁽⁶⁾
NO _x	650	650	200	650	200	250
Dust	30 ⁽⁷⁾	30 ⁽⁷⁾	—	30	—	—

⁽¹⁾ The value does not apply in the case of plants firing exclusively woody solid biomass.

⁽²⁾ 300 mg/Nm³ in the case of plants firing straw.

⁽³⁾ 1 100 mg/Nm³ in the case of plants with a rated thermal input greater than 5 MW and less than or equal to 20 MW.

⁽⁴⁾ Until 1 January 2030, 850 mg/Nm³ in the case of plants with a rated thermal input greater than 5 MW and less than or equal to 20 MW firing heavy fuel oil.

⁽⁵⁾ 400 mg/Nm³ in the case of low calorific gases from coke ovens, and 200 mg/Nm³ in the case of low calorific gases from blast furnaces, in the iron and steel industry.

⁽⁶⁾ 170 mg/Nm³ in the case of biogas.

⁽⁷⁾ 50 mg/Nm³ in the case of plants with a rated thermal input greater than 5 MW and less than or equal to 20 MW.

PART 2

Emission limit values for new medium combustion plants

Table 1

Emission limit values (mg/Nm³) for new medium combustion plants other than engines and gas turbines

Pollutant	Solid biomass	Other solid fuels	Gas oil	Liquid fuels other than gas oil	Natural gas	Gaseous fuels other than natural gas
SO ₂	200 ⁽¹⁾	400	—	350 ⁽²⁾	—	35 ⁽³⁾ ⁽⁴⁾
NO _x	300 ⁽⁵⁾	300 ⁽⁵⁾	200	300 ⁽⁶⁾	100	200
Dust	20 ⁽⁷⁾	20 ⁽⁷⁾	—	20 ⁽⁸⁾	—	—

⁽¹⁾ The value does not apply in the case of plants firing exclusively woody solid biomass.

⁽²⁾ Until 1 January 2025, 1 700 mg/Nm³ in the case of plants which are part of SIS or MIS.

⁽³⁾ 400 mg/Nm³ in the case of low calorific gases from coke ovens, and 200 mg/Nm³ in the case of low calorific gases from blast furnaces, in the iron and steel industry.

⁽⁴⁾ 100 mg/Nm³ in the case of biogas.

⁽⁵⁾ 500 mg/Nm³ in the case of plants with a total rated thermal input equal to or greater than 1 MW and less than or equal to 5 MW.

⁽⁶⁾ Until 1 January 2025, 450 mg/Nm³ when firing heavy fuel oil containing between 0,2 % and 0,3 % N and 360 mg/Nm³ when firing heavy fuel oil containing less than 0,2 % N in the case of plants which are part of SIS or MIS.

⁽⁷⁾ 50 mg/Nm³ in the case of plants with a total rated thermal input equal to or greater than 1 MW and less than or equal to 5 MW; 30 mg/Nm³ in the case of plants with a total rated thermal input greater than 5 MW and less than or equal to 20 MW.

⁽⁸⁾ 50 mg/Nm³ in the case of plants with a total rated thermal input equal to or greater than 1 MW and less than or equal to 5 MW.

Note:

The Benchmark values were proposed by the European Commission in its 2013 initial proposal. They were removed by the Codecision procedure (Parliament and Council). These figures have no legally-binding value, but they were officially published by the European Commission, and as such may be evoked in regions with high pollution.

ANNEX III**Benchmark values for more stringent emission limit values referred to in Article 5(4)**

All emission limit values set out in this Annex are defined at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6 % for combustion plants using solid fuels, 3 % for combustion plants, other than engines and gas turbines, using liquid and gaseous fuels and 15 % for engines and gas turbines.

Emission limit value benchmarks (mg/Nm³) for medium combustion plants other than engines and gas turbines

Pollutant	Rated thermal input (MW)	Solid biomass	Other solid fuels	Liquid fuels	Natural gas	Gaseous fuels other than natural gas
NO _x	1 - 5	200	100	120	70	120
	> 5 - 50	145	100	120	70	120
Particulate matter	1 - 5	10	10	10	-	-
	> 5 - 50	5	5	5	-	-