

EUROPEAN COMMISSION

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ANNEXES 1 to 4

# ANNEXES

to the Proposal

for a

# DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the limitation of emissions of certain pollutants into the air from medium combustion plants

# ANNEX I

# Information to be notified by the operator to the competent authority

1. Rated thermal input (MW) of the medium combustion plant;

2. Type of the medium combustion plant;

3. Type and share of fuels used according to the fuel categories laid down in Annex II;

4. The date of the start of the operation of the medium combustion plant;

5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code);

6. The expected number of operating hours of the medium combustion plant and the average load in use;

7. The applicable emission limit values, together with a declaration signed by the operator to operate the plant in accordance with those values, from the relevant date laid down in Article 5;

8. In case the second subparagraph of Article 5(2) is used, a declaration signed by the operator to operate the plant not more than 300 hours per year;

9. The name and the registered office of the operator and, in case of stationary medium combustion plants, the address where the plant is located.

### ANNEX II

#### **Emission limit values referred to in Article 5(1)**

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  $O_2$  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.

#### Part 1

#### Emission limit values for existing medium combustion plants

1. Emission limit values (mg/Nm<sup>3</sup>) for medium combustion plants other than engines and gas turbines

| Pollutant       | Solid<br>biomass  | Other solid<br>fuels | Liquid fuels other than | Heavy fuel<br>oil | Natural gas | Gaseous fuels other |
|-----------------|-------------------|----------------------|-------------------------|-------------------|-------------|---------------------|
|                 | oronnubb          | racib                | heavy fuel              | on                |             | than natural        |
|                 |                   |                      | oil                     |                   |             | gas                 |
| SO <sub>2</sub> | 200               | 400                  | 170                     | 350               | -           | 35                  |
| NO <sub>X</sub> | 650               | 650                  | 200                     | 650               | 200         | 250                 |
| Particulate     | 30 <sup>(1)</sup> | 30                   | 30                      | 30                | -           | -                   |
| matter          |                   |                      |                         |                   |             |                     |

 $(^{1})$  45 mg/Nm<sup>3</sup> for plants with a thermal input below or equal to 5 MW

| Pollutant       | Type of installation          | Liquid fuels | Natural gas | Gaseous      |
|-----------------|-------------------------------|--------------|-------------|--------------|
|                 |                               | -            | -           | fuels other  |
|                 |                               |              |             | than natural |
|                 |                               |              |             | gas          |
| SO <sub>2</sub> | Engines and gas turbines      | 60           | -           | 15           |
| NO <sub>X</sub> | Engines                       | $190(^{1})$  | $190(^{2})$ | $190(^{2})$  |
|                 | Gas turbines ( <sup>3</sup> ) | 200          | 150         | 200          |
| Particulate     | Engines and gas turbines      | 10           | -           | -            |
| matter          | -                             |              |             |              |

### 2. Emission limit values (mg/Nm<sup>3</sup>) for engines and gas turbines

(<sup>1</sup>) 1850 mg/Nm<sup>3</sup> in the following cases:

(i) for diesel engines the construction of which commenced before 18 May 2006;

(ii) for dual fuel engines in liquid mode.

 $(^{2})$  380 mg/Nm<sup>3</sup> for dual fuel engines in gas mode.

(<sup>3</sup>) Emission limit values are only applicable above 70 % load.

#### Part 2

### Emission limit values for new medium combustion plants

1. Emission limit values (mg/Nm<sup>3</sup>) for medium combustion plants other than engines and gas turbines

| Pollutant       | Solid<br>biomass | Other solid<br>fuels | Liquid fuels<br>other than | Heavy fuel<br>oil | Natural gas | Gaseous<br>fuels other |
|-----------------|------------------|----------------------|----------------------------|-------------------|-------------|------------------------|
|                 | DIOIIIASS        | Tuels                | heavy fuel                 | OII               |             | than natural           |
|                 |                  |                      | oil                        |                   |             | gas                    |
| SO <sub>2</sub> | 200              | 400                  | 170                        | 350               | -           | 35                     |
| NO <sub>X</sub> | 300              | 300                  | 200                        | 300               | 100         | 200                    |

| Particulate 1.1. 20<br>matter (1) | 20 | 20 | 20 | - | - |
|-----------------------------------|----|----|----|---|---|
|-----------------------------------|----|----|----|---|---|

(1) 25 mg/Nm<sup>3</sup> for plants with a thermal input below or equal to 5 MW

# 2. Emission limit values (mg/Nm<sup>3</sup>) for engines and gas turbines

| Pollutant       | Pollutant Type of installation |             | Natural gas         | Gaseous      |
|-----------------|--------------------------------|-------------|---------------------|--------------|
|                 |                                |             |                     | fuels other  |
|                 |                                |             |                     | than natural |
|                 |                                |             |                     | gas          |
| $SO_2$          | Engines and gas turbines       | 60          | -                   | 15           |
| NO <sub>X</sub> | Engines                        | $190(^{1})$ | 95 ( <sup>2</sup> ) | 190          |
|                 | Gas turbines ( <sup>3</sup> )  | 75          | 50                  | 75           |
| Particulate     | Engines and gas turbines       | 10          | -                   | -            |
| matter          |                                |             |                     |              |

(<sup>1</sup>) 225 mg/Nm<sup>3</sup> for dual fuel engines in liquid mode.

 $(^{2})$  190 mg/Nm<sup>3</sup> for dual fuel engines in gas mode.

(<sup>3</sup>) Emission limit values are only applicable above 70 % load.

### 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  $O_2$  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/Nm<sup>3</sup>) for medium combustion plants other than engines and gas turbines

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

Emission limit value benchmarks (mg/Nm<sup>3</sup>) for engines and gas turbines

| Pollutant       | Type of installation          | Liquid fuels | Natural gas | Gaseous<br>fuels other<br>than natural<br>gas |
|-----------------|-------------------------------|--------------|-------------|---|
| NO <sub>X</sub> | Engines                       | 150          | 35          | 35  |
|                 | Gas turbines ( <sup>1</sup> ) | 50           | 20          | 50  |

(<sup>1</sup>) benchmark is only applicable above 70 % load.

### ANNEX IV

### **Emission monitoring**

1. Periodic measurements of  $SO_2$ ,  $NO_x$  and particulate matter shall be required at least every three years for medium combustion plants the rated thermal input of which is greater than 1 MW and less than 20 MW, and at least annually for medium combustion plants the rated thermal input of which is equal to or greater than 20 MW but less than 50 MW.

2. Measurements are only required for pollutants for which an emission limit value is laid down in Annex II for the plant concerned.

3. The first measurements shall be carried out within three months following the registration of the plant.

4. As an alternative to the measurements of  $SO_2$  referred to in point 1, other procedures, verified and approved by the competent authority, may be used to determine the  $SO_2$  emissions.

5. Sampling and analysis of polluting substances and measurements of process parameters as well as any alternatives used as referred to under point 4, shall be carried out in accordance with CEN standards. If CEN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent scientific quality shall apply.