



STATUTORY INSTRUMENTS.

S.I. No. 566 of 2012



EUROPEAN UNION (LARGE COMBUSTION PLANTS)
REGULATIONS 2012

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I, PHIL HOGAN, Minister for the Environment, Community and Local Government, in exercise of the powers conferred on me by section 3 of the European Communities Act, 1972 (No. 27 of 1972) and for the purpose of giving effect to Chapter III and Annex V and giving further effect to Chapters I and VII of Directive 2010/75/EU of the European Parliament and the Council of 24 November 2010¹, hereby make the following Regulations:

Citation

1. These Regulations may be cited as the European Union (Large Combustion Plants) Regulations 2012.

Commencement

2. These Regulations come into operation on 7 January, 2013.

Definitions

3. (1) A word or expression which is used in these Regulations and which is also used in the Directive has, unless the context otherwise requires, the same meaning in these Regulations as it has in the Directive.

(2) In these Regulations—

“Agency” means the Environmental Protection Agency established under section 19 of the Environmental Protection Agency Act 1992 (No. 7 of 1992);

“Commission” means the European Commission;

“Competent authority” has the meaning assigned by Regulation 5;

“Directive” means Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions;

“geological storage of carbon dioxide” means injection accompanied by storage of carbon dioxide streams in underground geological formations;

“indigenous solid fuel” means a naturally occurring solid fuel fired in a combustion plant specifically designed for that fuel and extracted locally;

“licence” means a written authorisation issued by the Agency under Part IV of the Environmental Protection Agency Act 1992 (No. 7 of 1992);

¹OJ L 334, 17.12.2010, p17

*Notice of the making of this Statutory Instrument was published in
“Iris Oifigiúil” of 1st January, 2013.*

“Minister” means the Minister for the Environment, Community and Local Government;

“operating hours” means the time, expressed in hours, during which a combustion plant, in whole or in part, is operating and discharging emissions into the air, excluding start-up and shut-down periods;

“operator” means any natural or legal person who operates or controls in whole or in part the combustion plant or to whom decisive economic power over the technical functioning of the installation or plant has been delegated.

Scope

4. (1) These Regulations apply to combustion plants, the total rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used.

(2) These Regulations do not apply to the following combustion plants—

- (a) plants in which the products of combustion are used for the direct heating, drying, or any other treatment of objects or materials,
- (b) post-combustion plants designed to purify the waste gases by combustion which are not operated as independent combustion plants,
- (c) facilities for the regeneration of catalytic cracking catalysts,
- (d) facilities for the conversion of hydrogen sulphide into sulphur,
- (e) reactors used in the chemical industry,
- (f) coke battery furnaces,
- (g) cowpers,
- (h) any technical apparatus used in the propulsion of a vehicle, ship or aircraft,
- (i) gas turbines and gas engines used on offshore platforms,
- (j) plants which use any solid or liquid waste as a fuel other than the following—
 - (i) vegetable waste from agriculture and forestry,
 - (ii) vegetable waste from the food processing industry, if the heat generated is recovered,
 - (iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered,
 - (iv) cork waste, and

- (v) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating and which includes, in particular, such wood waste originating from construction and demolition waste.

Competent Authority

5. The Agency is the competent authority in the State for the purposes of Chapter III of the Directive and these Regulations.

Operators

6. (1) An operator of an combustion plant to which these regulations apply must hold a current licence issued by the Agency.

(2) In the event of a breach of the licence conditions, the operator shall—

- (a) inform the Agency immediately,
- (b) immediately take the necessary measures to ensure that compliance is restored within the shortest possible time, and
- (c) take any appropriate complementary measures that the Agency considers necessary to restore compliance.

(3) Where a breach of licence conditions poses an immediate danger to human health or threatens to cause an immediate significant adverse effect upon the environment, and until compliance is restored in accordance with paragraphs 2(b) and 2(c), the operation of the combustion plant or part thereof shall be suspended.

(4) In the event of an accident at an installation the operator shall—

- (a) inform the Agency immediately,
- (b) immediately take measures to limit the environmental consequences and to prevent further possible incidents or accidents, and
- (c) take any appropriate complementary measures that the Agency considers necessary to limit the environmental consequences and to prevent further possible incidents or accidents.

Aggregation Rules

7. (1) Where the waste gases of two or more separate combustion plants are discharged through a common stack, this shall be considered as a single combustion plant and the capacities added for the purpose of calculating the total rated thermal input.

(2) Where two or more separate combustion plants which have been granted a licence for the first time on or after 1 July 1987, or the operators of which have submitted a complete application for a licence on or after that date, are installed in such a way that, taking technical and economic factors into account,

their waste gases could in the judgement of the Agency, be discharged through a common stack, this shall be considered as a single combustion plant and the capacities added for the purpose of calculating the total rated thermal input.

(3) For the purpose of calculating the total rated thermal input of a combination of combustion plants referred to in paragraphs 1 and 2, individual combustion plants with a rated thermal input below 15 MW shall not be considered.

Emission Limit Values

8. (1) Waste gases from combustion plants shall be discharged in a controlled way by means of a stack, containing one or more flues, the height of which is calculated in such a way as to safeguard human health and the environment.

(2) (a) All licences for installations containing combustion plants which have been granted a licence by the Agency before 7 January 2013, or the operators of which have submitted a complete application to the Agency for a licence 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 Schedule 1.

(b) All licences for installations containing combustion plants which had been granted an exemption by the Agency under Regulation 9(1) of the Large Combustion Plant Regulations 2003 (S.I. No. 644 of 2003) and which are in operation after 1 January 2016, shall include conditions ensuring that emissions into the air from these plants do not exceed the emission limit values set out in Schedule 2.

(3) All licences for installations containing combustion plants not covered by paragraph 2 shall include licensing conditions ensuring that emissions into the air from these plants do not exceed the emission limit values set out in Schedule 2.

(4) (a) The emission limit values set out in Schedules 1 and 2 as well as the minimum rates of desulphurisation set out in Schedule 5 shall apply to the emissions of each common stack in relation to the total rated thermal input of the entire combustion plant.

(b) Where emission limit values under paragraph 4(a) may be applied for a part of a combustion plant with a limited number of operating hours, those limit values shall apply to the emissions of that part of the plant, but shall be set in relation to the total rated thermal input of the entire combustion plant.

(5) The Agency may grant a derogation for a maximum of 6 months from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3 for sulphur dioxide in respect of a combustion plant which to this end normally uses low-sulphur fuel, in cases where the operator is unable to comply with those limit values because of an interruption in the supply of low-sulphur fuel resulting from a serious shortage.

(6) The Agency shall immediately inform the Minister and the Commission of any derogation granted under paragraph 5.

(7) In cases where a combustion plant using only gaseous fuel has to resort exceptionally to the use of other fuels because of a sudden interruption in the supply of gas and for this reason would need to be equipped with a waste gas purification facility—

- (a) the operator shall immediately inform the Agency,
- (b) the Agency may grant a derogation from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3,
- (c) the period for which such a derogation is granted shall not exceed 10 days except where there is an overriding need to maintain energy supplies, and
- (d) the Agency shall, within the shortest possible time, inform the Minister and the Commission of any derogation granted.

(8) Where a combustion plant is extended, the emission limit values set out in Schedule 2 shall apply to the extended part of the plant affected by the change and shall be set in relation to the total rated thermal input of the entire combustion plant. In the case of a change to a combustion plant, which may have consequences for the environment and which affects a part of the plant with a rated thermal input of 50 MW or more, the emission limit values as set out in Schedule 2 shall apply to the part of the plant which has changed in relation to the total rated thermal input of the entire combustion plant.

(9) The emission limit values set out in Schedules 1 and 2 shall not apply to the following combustion plants—

- (a) diesel engines, and
- (b) recovery boilers within installations for the production of pulp.

Desulphurisation rate

9. (1) Combustion plants firing indigenous solid fuel which cannot comply with the emission limit values for sulphur dioxide referred to in Regulation 8(2) and 8(3) due to the characteristics of this fuel may apply the minimum rates of desulphurisation set out in Schedule 5.

(2) Combustion plants firing indigenous fuel and applying the minimum rates of desulphurisation set out in Schedule 5 shall operate in accordance with the compliance rules set out in Schedule 6 and with prior validation by the Agency of the technical report referred to in Regulation 19(5)(a).

(3) Combustion plants firing indigenous solid fuel that co-incinerate waste and which cannot comply with the C_{proc} values for sulphur dioxide as set out in points 3.1 or 3.2 of Part 4 of Annex VI of the Directive due to the characteristics

of the indigenous solid fuel may apply instead the minimum rates of desulphurisation set out in Schedule 5, in accordance with the compliance rules set out in Schedule 6.

(4) If paragraph 3 is applied then C_{waste} as referred to in point 1 of Part 4 of Annex VI of the Directive shall be equal to 0 mg/Nm³.

Transitional National Plan

10. (1) Notwithstanding Regulation 8, the Minister may set out and notify a transitional national plan to the Commission to cover the period from 1 January 2016 to 30 June 2020.

(2) The transitional national plan may apply to combustion plants whose operators applied or were granted their first licence by the Agency before 27 November 2002, provided that the plant was put into operation no later than 27 November 2003.

(3) (a) The transitional national plan must cover emissions of one or more of the following pollutants—

- (i) nitrogen oxides,
- (ii) sulphur dioxide, and
- (iii) dust.

(b) For gas turbines, only nitrogen oxides emissions shall be covered by the transitional national plan.

(4) The transitional national plan shall not include any of the following combustion plants—

- (a) those to which Regulation 11(1) applies;
- (b) those within refineries firing low calorific gases from the gasification of refinery residues or the distillation and conversion residues from the refining of crude oil for own consumption, alone or with other fuels,
- (c) those to which Regulation 13 applies, and
- (d) those which are granted an exemption under Regulation 9(1) of the Large Combustion Plant Regulations 2003 (S.I. No. 644 of 2003).

(5) Combustion plants covered by the plan may be exempted from compliance with the emission limit values referred to in Regulation 8(2) for the pollutants which are subject to the plan or, where applicable, with the rates of desulphurisation referred to in Regulation 9.

(6) The emission limit values for sulphur dioxide, nitrogen oxides and dust set out in the licence for the combustion plant applicable on 31 December 2015,

pursuant in particular to the requirements of Directives 2001/80/EC² and 2008/1/EC³, shall at least be maintained.

(7) Combustion plants with a total rated thermal input of more than 500 MW firing solid fuels, which were granted the first licence after 1 July 1987, shall comply with the emission limit values for nitrogen oxides set out in Schedule 1.

(8) For each of the pollutants it covers, the transitional national plan shall set a ceiling defining the maximum total annual emissions for all of the plants covered by the plan on the basis of each plant's total rated thermal input on 31 December 2010, its actual annual operating hours and its fuel use, averaged over the last 10 years of operation up to and including 2010.

(9) (a) The ceiling for the year 2016 shall be calculated on the basis of the relevant emission limit values set out in Annexes III to VII to Directive 2001/80/EC or, where applicable, on the basis of the rates of desulphurisation set out in Annex III to Directive 2001/80/EC.

(b) In the case of gas turbines, the emission limit values for nitrogen oxides set out for such plants in Part B of Annex VI to Directive 2001/80/EC shall be used.

(10) The ceilings for the years 2019 and 2020 shall be calculated on the basis of the relevant emission limit values set out in Schedule 1 or, where applicable, the relevant rates of desulphurisation set out in Schedule 5 to this Directive. The ceilings for the years 2017 and 2018 shall be set providing a linear decrease of the ceilings between 2016 and 2019.

(11) Where a plant included in the transitional national plan is closed or no longer falls within the scope of these Regulations, this shall not result in an increase in total annual emissions from the remaining plants covered by the plan.

(12) The transitional national plan shall contain provisions on monitoring and reporting that comply with the implementing rules established in accordance with Commission Implementation Decision 2012/115/EU⁴ of 10 February 2012, as well as the measures foreseen for each of the plants in order to ensure timely compliance with the emission limit values that will apply from 1 July 2020.

(13) The Minister shall inform the Commission of any subsequent changes to the plan.

Limited life time derogation

11. (1) During the period from 1 January 2016 to 31 December 2023, the Agency may exempt combustion plants from compliance with the emission limit values referred to in Regulation 8(2) and with the rates of desulphurisation referred to in Regulation 9, where applicable, and from their inclusion in the transitional national plan referred to in Regulation 10, provided that the following conditions are fulfilled—

²OJ L 309, 7.11.2001, p1

³OJ L 24, 29.1.2008, p8

⁴OJ L 52, 24.2.2012, p12

- (a) the operator of the combustion plant undertakes, in a written declaration submitted by 1 January 2014 at the latest to the Agency, not to operate the plant for more than 17,500 operating hours, starting from 1 January 2016 and ending no later than 31 December 2023,
- (b) the operator is required to submit each year to the Agency a record of the number of operating hours since 1 January 2016,
- (c) the emission limit values for sulphur dioxides, nitrogen oxides and dust set out in the licence for the combustion plant applicable on 31 December 2015, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, shall at least be maintained during the remaining operational life of the combustion plant. Combustion plants with a total rated thermal input of more than 500MW firing solid fuels, which were granted the first licence after 1 July 1987, shall comply with the emission limit values for nitrogen oxides set out in Schedule 1, and
- (d) the combustion plant has not been granted an exemption under Regulation 9(1) of the Large Combustion Plants Regulations 2003 (S.I. No. 644 of 2003).

(2) The Agency shall, before 1 January 2016, communicate to the Commission a list of any combustion plants to which paragraph 1 applies, including their total rated thermal input, the fuel types used and the applicable emission limit values for sulphur dioxide, nitrogen oxides and dust. For plants subject to paragraph 1, the Agency shall communicate annually to the Commission a record of the number of operating hours since 1 January 2016.

(3) In case of a combustion plant being, on 6 January 2011, part of a small isolated system and accounting at that date for at least 35% of the electricity supply within that system, which is unable, due to its technical characteristics, to comply with the emission limit values referred to in Regulation 8(2), the number of operating hours referred to in paragraph 1(a) of this Regulation shall be 18,000, starting from 1 January 2020 and ending no later than 31 December 2023, and the date referred to in paragraph 1(b) and paragraph 2 shall be 1 January 2020.

(4) In the case of a combustion plant with a total rated thermal input of more than 1,500 MW which started operating before 31 December 1986 and fires indigenous solid fuel with a net calorific value of less than 5,800 kJ/kg, a moisture content greater than 45% by weight, a combined moisture and ash content greater than 60% by weight and a calcium oxide content in ash greater than 10%, the number of operating hours referred to in paragraph 1(a) shall be 32,000.

Small isolated systems

12. (1) Until 31 December 2019, combustion plants being, on 6 January 2011, part of a small isolated system may be exempted from compliance with the

emission limit values referred to in Regulation 8(2) and the rates of desulphurisation referred to in Regulation 9, where applicable.

(2) Until 31 December 2019, the emission limit values set out in the licences of combustion plants under paragraph 1, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, shall at least be maintained.

(3) Combustion plants with a total rated thermal input of more than 500 MW firing solid fuels, which were granted the first licence after 1 July 1987, shall comply with the emission limit values for nitrogen oxides set out in Schedule 1.

District heating plants

13. (1) Until 31 December 2022, a combustion plant may be exempted from compliance with the emission limit values referred to in Regulation 8(2) and the rates of desulphurisation referred to in Regulation 9 provided that the following conditions are fulfilled—

- (a) the total rated thermal input of the combustion plant does not exceed 200 MW,
- (b) the plant was first granted a licence before 27 November 2002 or the operator of that plant had submitted a complete application for a licence before that date, provided that it was put into operation no later than 27 November 2003,
- (c) at least 50% of the useful heat production of the plant, as a rolling average over a period of 5 years, is delivered in the form of steam or hot water to a public network for district heating, and
- (d) the emission limit values for sulphur dioxide, nitrogen oxides and dust set out in its licence applicable on 31 December 2015, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, are at least maintained until 31 December 2022.

Geological storage of carbon dioxide

14. (1) The Agency shall ensure that operators of all combustion plants with a rated electrical output of 300MW or more and for which permission is granted after 25 June 2011 have assessed whether the following conditions are met—

- (a) suitable storage sites are available,
- (b) transport facilities are technically and economically feasible, and
- (c) it is technically and economically feasible to retrofit for carbon dioxide capture,

having regard to the European Communities (Geological Storage of Carbon Dioxide) Regulations 2011 (S.I. No. 575 of 2011).

(2) If the conditions laid down in paragraph 1 are met, the Agency shall ensure that suitable space is set aside on the installation site for the equipment necessary to capture and compress carbon dioxide is set aside.

(3) The Agency shall determine whether the conditions are met on the basis of the assessment referred to in paragraph 1 and other available information, particularly concerning the protection of the environment and human health.

Malfunction or breakdown of the abatement equipment

15. (1) The Agency shall ensure that provision is made in licences for procedures relating to malfunction or breakdown of abatement equipment.

(2) The operator shall notify the Agency within 48 hours after the malfunction or breakdown of abatement equipment.

(3) In the case of a breakdown, the Agency shall require the operator to reduce or close down operations if a return to normal operation is not achieved within 24 hours, or to operate the plant using low polluting fuels.

(4) The cumulative duration of unabated operation shall not exceed 120 hours in any 12-month period.

(5) The Agency may grant a derogation from the time limits set out in paragraphs 3 and 4 in one of the following cases—

- (a) there is an overriding need to maintain energy supplies; or
- (b) the combustion plant with the breakdown would be replaced for a limited period by another plant which would cause an overall increase in emissions.

Monitoring of emissions into air

16. (1) The Agency shall ensure that the monitoring of air polluting substances is carried out in accordance with Schedule 3.

(2) The installation and functioning of the automated monitoring equipment shall be subject to control and to annual surveillance tests as set out in Schedule 3.

(3) The Agency shall determine the location of the sampling or measurement points to be used for the monitoring of emissions.

(4) All monitoring results shall be recorded, processed and presented in such a way as to enable the Agency to verify compliance with the operating conditions and emission limit values which are included in the licence.

Compliance with emission limit values

17. The emission limit values for air shall be regarded as being complied with if the conditions set out in Schedule 4 are fulfilled.

Multi-fuel firing combustion plants

18. (1) In the case of a multi-fuel firing combustion plant involving the simultaneous use of two or more fuels, the Agency shall set the emission limit values in accordance with the following steps—

- (a) taking the emission limit value relevant for each individual fuel and pollutant corresponding to the total rated thermal input of the entire combustion plant as set out in Schedules 1 and 2,
- (b) determining fuel-weighted emission limit values, which are obtained by multiplying the individual emission limit value referred to in paragraph 1(a) by the thermal input delivered by each fuel, and dividing the product of multiplication by the sum of the thermal inputs delivered by all fuels, and
- (c) aggregating the fuel-weighted emission limit values.

(2) In the case of multi-fuel firing combustion plants covered by Regulation 8(2), which use the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, the following emission limit values may be applied instead of the emission limit values set according to paragraph 1—

- (a) where, during the operation of the combustion plant, the proportion contributed by the determinative fuel to the sum of the thermal inputs delivered by all fuels is 50% or more, the emission limit value set in Schedule 1 for the determinative fuel,
- (b) where the proportion contributed by the determinative fuel to the sum of the thermal inputs delivered by all fuels is less than 50%, the emission limit value determined in accordance with the following steps,
 - (i) taking the emission limit values set out in Schedule 1 for each of the fuels used, corresponding to the total rated thermal input of the combustion plant,
 - (ii) calculating the emission limit value of the determinative fuel by multiplying the emission limit value, determined for that fuel according to point (i), by a factor of two, and subtracting from this product the emission limit value of the fuel used with the lowest emission limit value as set out in Schedule 1, corresponding to the total rated thermal input of the combustion plant,
 - (iii) determining the fuel-weighted emission limit value for each fuel used by multiplying the emission limit value determined under points (i) and (ii) by the thermal input of the fuel concerned and by dividing the product of this multiplication by the sum of the thermal inputs delivered by all fuels, and
 - (iv) aggregating the fuel-weighted emission limit values determined under point (iii).

(3) In the case of multi-fuel firing combustion plants covered by Regulation 8(2), which use the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, the average emission limit values for sulphur dioxide set out in Schedule 7 may be applied instead of the emission limit values set according to paragraphs 1 or 2.

Reporting

19. (1) For each combustion plant the Agency shall, from 1 January 2016, establish an annual inventory of the sulphur dioxide, nitrogen oxides and dust emissions and energy input.

(2) The annual inventory shall include the following data for each combustion plant, taking into account the aggregation rules set out in Regulation 7—

- (a) the total rated thermal input (MW) of the combustion plant,
- (b) the type of combustion plant: boiler, gas turbine, gas engine, diesel engine, other (specifying the type),
- (c) the date of the start of operation of the combustion plant,
- (d) the total annual emissions (tonnes per year) of sulphur dioxide, nitrogen oxides and dust (as total suspended particles),
- (e) the number of operating hours of the combustion plant, and
- (f) the total annual amount of energy input, related to the net calorific value (TJ per year), broken down in terms of the following categories of fuel: coal, lignite, biomass, peat, other solid fuels (specifying the type), liquid fuels, natural gas, other gases (specifying the type).

(3) The annual plant-by-plant data contained in inventories shall be made available to the Minister or the Commission upon request.

(4) In the case of combustion plants included in a transitional national plan under Regulation 10, the Agency shall report, by 1 January 2017 and each year thereafter for the duration of the transitional national plan, annual plant-by-plant data contained in inventories to the Minister and the Commission.

(5) The Agency shall make available to the Minister and the Commission a summary of the inventories every 3 years within 12 months from the end of the three-year period considered. This summary shall show separately the data for combustion plants within refineries.

(6) The Agency shall, from 1 January 2016, report the following data annually to the Minister and the Commission—

- (a) for combustion plants to which Regulation 9 applies, the sulphur content of the indigenous solid fuel used and the rate of desulphurisation achieved, averaged over each month. For the first year where Regulation 9 is applied, the technical justification of the non-feasibility of

complying with the emission limit values referred to in Regulation 8(2) and 8(3) shall also be reported, and

- (b) for combustion plants which do not operate more than 1,500 operating hours per year as a rolling average over a period of 5 years, the number of operating hours per year.

Revocations

20. The following are revoked:

- (a) Large Combustion Plants Regulations 2003 (S.I. No. 644 of 2003), and
- (b) Large Combustion Plants Regulations 2010 (S.I. No. 371 of 2010).

SCHEDULE 1

Emission limit values for combustion plants referred to in Regulation 8(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 licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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.

Combustion plants using liquid fuels, which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 850 mg/Nm³ in case of plants with a total rated thermal input not exceeding 300 MW and of 400 mg/Nm³ in case of plants with a total rated thermal input greater than 300 MW.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1,500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding two paragraphs in relation to the total rated thermal input of the entire combustion plant. In such cases the emissions through each of those flues shall be monitored separately.

3. Emission limit values (mg/Nm³) for SO₂ for combustion plants using gaseous fuels with the exception of gas turbines and gas engines.

In general	35
Liquefied gas	5
Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

Combustion plants, firing low calorific gases from gasification of refinery residues, which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 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 pulverized 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 licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 licence 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.

Combustion plants using liquid fuels, with a total rated thermal input greater than 500 MW which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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 400 mg/Nm³.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1,500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding three paragraphs in relation to the total rated thermal input of the entire combustion plant. In such cases the emissions through each of those flues shall be monitored separately.

5. Gas turbines (including combined cycle gas turbines (CCGT)) using light and middle distillates as liquid fuels shall be subject to an emission limit value for NO_x of 90 mg/Nm³ and for CO of 100 mg/Nm³.

Gas turbines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

6. Emission limit values (mg/Nm³) for NO_x and CO for gas fired combustion plants.

	NO _x	CO
Combustion plants firing natural gas with the exception of gas turbines and gas engines	100	100
Combustion plants firing blast furnace gas, coke oven gas or low calorific gases from gasification of refinery residues, with the exception of gas turbines and gas engines	200 ⁽⁴⁾	-
Combustion plants firing other gases, with the exception of gas turbines and gas engines	200 ⁽⁴⁾	-
Gas turbines (including CCGT), using natural gas ⁽¹⁾ as fuel	50 ⁽²⁾ ⁽³⁾	100
Gas turbines (including CCGT), using other gases as fuel	120	-
Gas engines	100	100

Notes:

⁽¹⁾ Natural gas is naturally occurring methane with not more than 20% (by Volume) of inerts and other constituents.

⁽²⁾ 75 mg/Nm³ in the following cases, where the efficiency of the gas turbine is determined at ISO base load conditions:

(i) gas turbines, used in combined heat and power systems having an overall efficiency greater than 75%;

- (ii) gas turbines used in combined cycle plants having an annual average overall electrical efficiency greater than 55%;
 - (iii) gas turbines for mechanical drives.
- (3) For single cycle gas turbines not falling into any of the categories mentioned under note (2), but having an efficiency greater than 35% — determined at ISO base load conditions — the emission limit value for NO_x shall be $50\eta/35$ where η is the gas turbine efficiency at ISO base load conditions expressed as a percentage.
- (4) 300 mg/Nm³ for such combustion plants with a total rated thermal input not exceeding 500 MW which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence before that date, provided that the plant was put into operation no later than 27 November 2003.

For gas turbines (including CCGT), the NO_x and CO emission limit values set out in the table contained in this point apply only above 70% load.

For gas turbines (including CCGT) which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence 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, the emission limit value for NO_x is 150 mg/Nm³ when firing natural gas and 200 mg/Nm³ when firing other gases or liquid fuels.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1,500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding paragraph in relation to the total rated thermal input of the entire combustion plant. In such cases, the emissions through each of those flues shall be monitored separately.

Gas turbines and gas engines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

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

Notes

⁽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 licence before 27 November 2002 or the operators of which had submitted a complete application for a licence before that date, provided that the plant was put into operation no later than 27 November 2003.

8. Emission limit values (mg/Nm³) for dust for combustion plants using gaseous fuels with the exception of gas turbines and gas engines.

In general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

SCHEDULE 2

Emission limit values for combustion plants referred to in Regulation 8(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 Agency, 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 fuel
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

3. Emission limit values (mg/Nm³) for SO₂ for combustion plants using gaseous fuels with the exception of gas turbines and gas engines.

In general	35
Liquefied gas	5
Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

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 pulverized lignite combustion	250	300
100-300	200	200	150
>300	150 200 in case of pulverized lignite combustion	150	100

5. Gas turbines (including CCGT) using light and middle distillates as liquid fuels shall be subject to an emission limit value for NO_x of 50 mg/Nm³ and for CO of 100 mg/Nm³.

Gas turbines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

6. Emission limit values (mg/Nm³) for NO_x and CO for gas fired combustion plants.

	NO _x	CO
Combustion plants other than gas turbines and gas engines	100	100
Gas turbines (including CCGT)	50 ⁽¹⁾	100
Gas engines	75	100

Note:

- ⁽¹⁾ For single cycle gas turbines having an efficiency greater than 35% — determined at ISO base load conditions — the emission limit value for NO_x shall be $50 \times \eta / 35$ where η is the gas turbine efficiency at ISO base load conditions expressed as a percentage.

For gas turbines (including CCGT), the NO_x and CO emission limit values set out in this point apply only above 70 % load.

Gas turbines and gas engines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

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

8. Emission limit values (mg/Nm³) for dust for combustion plants using gaseous fuels with the exception of gas turbines and gas engines.

In general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

SCHEDULE 3

Emission monitoring

1. The concentrations of SO₂, NO_x and dust in waste gases from each combustion plant with a total rated thermal input of 100 MW or more, shall be measured continuously.

The concentration of CO in waste gases from each combustion plant, firing gaseous fuels with a total rated thermal input of 100 MW or more, shall be measured continuously.

2. The Agency may decide not to require the continuous measurements referred to in point 1 in the following cases:

- (a) for combustion plants with a life span of less than 10,000 operational hours;
- (b) for SO₂ and dust from combustion plants firing natural gas;
- (c) for SO₂ from combustion plants firing oil with known sulphur content in cases where there is no waste gas desulphurisation equipment; or
- (d) for SO₂ from combustion plants firing biomass if the operator can prove that the SO₂ emissions can under no circumstances be higher than the prescribed emission limit values.

3. Where continuous measurements are not required, measurements of SO₂, NO_x, dust and, for gas fired plants, also of CO shall be required at least once every 6 months.

4. For combustion plants firing coal or lignite, the emissions of total mercury shall be measured at least once per year.

5. As an alternative to the measurements of SO₂ and NO_x referred to in point 3, other procedures, verified and approved by the Agency, may be used to determine the SO₂ and NO_x emissions. Such procedures shall use relevant CEN standards or, if CEN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent scientific quality.

6. The operator shall inform the Agency of any significant changes in the type of fuel used or in the mode of operation of the plant and the Agency shall

decide whether the monitoring requirements laid down in points 1 to 4 are still adequate or require adaptation.

7. The continuous measurements carried out in accordance with point 1 shall include the measurement of the oxygen content, temperature, pressure and water vapour content of the waste gases. The continuous measurement of the water vapour content of the waste gases shall not be necessary, provided that the sampled waste gas is dried before the emissions are analysed.

8. Sampling and analysis of relevant polluting substances and measurements of process parameters as well as the quality assurance of automated measuring systems and the reference measurement methods to calibrate those systems 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.

The automated measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once per year.

The operator shall inform the Agency about the results of the checking of the automated measuring systems.

9. At the emission limit value level, the values of the 95% confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

Carbon monoxide (CO)	10%
Sulphur dioxide (SO ₂)	20%
Nitrogen oxides (NO _x)	20%
Dust (Particulate Matter (PM))	30%

10. The validated hourly and daily average values shall be determined from the measured valid hourly average values after having subtracted the value of the confidence interval specified in point 9.

Any day, in which more than three hourly average values are invalid due to malfunction or maintenance of the automated measuring system, shall be invalidated. If more than 10 days over a year are invalidated for such situations, the Agency shall require the operator to take adequate measures to improve the reliability of the automated measuring system.

11. In the case of plants which must comply with the rates of desulphurisation referred to in Regulation 9, the sulphur content of the fuel which is fired in the combustion plant shall also be regularly monitored. The competent authorities shall be informed of substantial changes in the type of fuel used.

SCHEDULE 4

Assessment of compliance with emission limit values

1. In the case of continuous measurements, the emission limit values set out in Schedules 1 and 2 shall be regarded as having been complied with if the evaluation of the measurement results indicates, for operating hours within a calendar year, that all of the following conditions have been met:

- (a) no validated monthly average value exceeds the relevant emission limit values set out in Schedules 1 and 2;
- (b) no validated daily average value exceeds 110% of the relevant emission limit values set out in Schedules 1 and 2;
- (c) in cases of combustion plants composed only of boilers using coal with a total rated thermal input below 50 MW, no validated daily average value exceeds 150% of the relevant emission limit values set out in Schedules 1 and 2;
- (d) 95% of all the validated hourly average values over the year do not exceed 200% of the relevant emission limit values set out in Schedules 1 and 2.

The validated average values are determined as set out in point 10 of Schedule 3.

For the purpose of the calculation of the average emission values, the values measured during the periods referred to in Regulation 8(5) and (7) and Regulation 15 as well as during the start-up and shut-down periods shall be disregarded. The start-up and shut-down periods shall be as set out in Commission Implementing Decision 2012/49/EU of 7 May 2012⁵.

2. Where continuous measurements are not required, the emission limit values set out in Schedules 1 and 2 shall be regarded as having been complied with, if the results of each of the series of measurements or of the other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.

⁵OJ L 123, 9.5.2012, p44

SCHEDULE 5*Minimum rate of desulphurisation*

1. Minimum rate of desulphurisation for combustion plants referred to in Regulation 8(2).

Total rated thermal input (MW)	Minimum rate of desulphurisation	
	Plants which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence before that date, provided that the plant was put into operation no later than 27 November 2003	Other plants
50-100	80%	92%
100-300	90%	92%
>300	96% ⁽¹⁾	96%

Note:

⁽¹⁾ For combustion plants firing oil shale, the minimum rate of desulphurization is 95%

2. Minimum rate of desulphurization for combustion plants referred to in Regulation 8(3).

Total rated thermal input (MW)	Minimum rate of desulphurisation
50-100	93%
100-300	93%
>300	97%

SCHEDULE 6*Compliance with rate of desulphurisation*

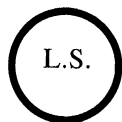
The minimum rates of desulphurisation set out in Schedule 5 shall apply as a monthly average limit value.

SCHEDULE 7*Average emission limit values for multi-fuel firing combustion plants within a refinery*

Average emission limit values (mg/Nm³) for SO₂ for multi-fuel firing combustion plants within a refinery, with the exception of gas turbines and gas engines, which use the distillation and conversion residues from the refining of crude oil for own consumption, alone or with other fuels:

- (a) for combustion plants which were granted a licence before 27 November 2002 or the operators of which had submitted a complete application for a licence before that date, provided that the plant was put into operation no later than 27 November 2003: 1,000 mg/Nm³;
- (b) for other combustion plants: 600 mg/Nm³.

These 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 and 3% for liquid and gaseous fuels.



GIVEN under my Official Seal,
21 December 2012.

PHIL HOGAN,
Minister for the Environment, Community and Local
Government.

EXPLANATORY NOTE

(This note is not part of the Regulation and does not purport to be a legal interpretation)

These Regulations transpose Chapter III and Annex V of Directive 2010/75/EU on industrial emissions, revoking and replacing the Large Combustion Plant Regulations 2003 (S.I. No. 644 of 2003).

These Regulations apply to combustion plants, the total rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used.

These Regulations set out special provisions for combustion plants in order to reduce acidification, ground-level ozone and particles by controlling emissions of sulphur dioxide (SO₂) and nitrogen oxides (NO_x) and dust (particulate matter (PM)) from large combustion plants in power stations and industrial installations running on solid, liquid or gaseous fuel.

Combustion plants must comply with emission limit values (ELVs), enforced by the Environmental Protection Agency (EPA), which set limits for each plant on the maximum concentration of a pollutant emitted by the plant. Maximum concentration standards (ELVs) are set for both new and existing plant and revised ELVs are to apply from 2016.

These Regulations allow for a Transitional National Plan (TNP) to be notified to the European Commission for consideration for approval. A TNP may be applied to older combustion plants (i.e. those operational before November 2003) to cover the period January 2016 to June 2020. A TNP allows for collective compliance for older combustion plant by allowing included plants to pool their emissions to be assessed on an overall volume (rather than concentration) basis at the end of each year. This provides flexibility and additional time for operators of older combustion plant to comply with reduced ELVs. A TNP must provide for an appropriate balance between protection of the environment and cost-effective abatement solutions.

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