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NOTE

From:	General Secretariat of the Council
To:	Delegations
No. prev. doc.:	11092/14 ENV 632 ENER 325 IND 189 TRANS 330 ENT 144 SAN 241 PARLNAT 185 CODEC 1501
No. Cion doc.:	18170/13 ENV 1236 ENER 601 IND 389 TRANS 694 ENT 357 SAN 557 PARLNAT 326 CODEC 3089 - COM(2013) 919 final
Subject:	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 - Comments from delegations

Delegations will find in the Annex comments received from Greece on the abovementioned proposal.

GREECE

The proposed ELVs for the islands regarding new installations (see the proposed amendments in Annex II that follows) that are not interconnected to the mainland have as a source of inspiration the following:

- Ft.5 of Table 2 (NOx emissions from diesel engines) comes directly from GP (that, in this case, refers only to new installations and not existing ones) for a 10 year transitional period (“... a transition period of 10 years after the entry into force of the present Protocol for a Party may be applied ...”). After this 10 years period the GP provides for 225 mg/Nm³ for diesel engines 5-20 MW (for HFO) and 190 mg/Nm³ for those diesel engines >20 MW.
- Ft.7 of Tables 1 and 2 (that refer to PM) and ft.6 of Table 2 (that refers to NOx from gas turbines that operate with diesel oil) are based on the practical experience of the Greek authorities.
- The other proposed ELVs for SIS/MIS (i.e. ft.5 and 6 of Table 1 and ft.4 of Table 2) come directly from the existing BREFs (i.e. as is the case for the other footnotes that have been included and do not refer to the non interconnected islands).

Regarding existing installations, for reasons of simplicity, we propose to apply the same ELVs but 5 years later than the “normal” application date, i.e. 2025 instead of 2030.

Furthermore, the definition of SIS/MIS may need to be adjusted in order to be appropriate for this Directive.

ANNEX II

Emission limit values referred to in Article 5(1)

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Part 2

Emission limit values for new medium combustion plants

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

Pollutant	Solid biomass	Other solid fuels	Liquid fuels other than heavy fuel oil	Heavy fuel oil	Natural gas	Gaseous fuels other than natural gas
SO ₂	200	400	170	350 ⁽²⁾	-	35 ⁽³⁾⁽⁴⁾
NO _x	300	300	200	300 ⁽⁶⁾	100	200
Particulate matter	20 ⁽¹⁾	20	20 ⁽²⁾	20 ⁽⁷⁾	-	-

⁽¹⁾ 25 mg/Nm³ for plants with a thermal input below or equal to 5 MW

⁽²⁾ 30 mg/Nm³ in case of recovery boilers in installations for Kraft pulp production

⁽³⁾ 45 mg/Nm³ in case of refinery fuel gas

⁽⁴⁾ 400 mg/Nm³ in case of low calorific gases from coke oven and 200 mg/Nm³ in case of low calorific gases from blast furnace (iron and steel industry)

⁽⁵⁾ 1700 mg/Nm³ in case of boilers in Small Isolated Systems (SIS) and Micro Isolated Systems (MIS)* as defined in Directive 2009/72/EC

Comment: According to BREF LCP 2006, par. 6.1.10.1.2 Control of emissions to air from liquid fuel-fired boilers / Abatement of SO₂ emissions, p. 353:

“Switching to low-sulphur oil might be a technique which can make a significant contribution to SO₂ emissions reduction. A decrease of 0,5% in the oil sulphur content leads to a decrease in the emission value by about 800 mg/Nm³ at 3% oxygen in the waste gas.”

The ELV of 1700 mg/Nm³ corresponds stoichiometrically to low sulphur HFO (1% w.w), i.e. the minimum content that is available in the Greek market.

⁽⁶⁾ 450 mg/Nm³ **for HFO firing with max. 0.3 % N in fuel oil and 360 mg/Nm³ for HFO firing with max. 0.2 % N in fuel oil** in case of boilers in SIS and MIS as defined in Directive 2009/72/EC

Comment: According to BREF LCP 2006, par6.5.3.4 BAT for liquid fuel-fired boilers / BAT-AELs for NO_x emissions, p. 401:

“BAT options to achieve these levels:

- *For HFO firing with max. 0.3 % N in fuel oil NO_x<450 mg/Nm³.*
- *For HFO firing with max. 0.2 % N in fuel oil NO_x<360 mg/Nm³.*”

⁽⁷⁾ **50 400** mg/Nm³ in case of boilers in SIS and MIS as defined in Directive 2009/72/EC.]

Comment: Based on the experience of the Greek authorities from boilers using HFO with low sulphur content (1%) and low ash content, to gether with electrostatic filters.

* Further changes may be required to address existing installations and to fully align the text with the provisions of the Gothenburg Protocol, where relevant.

2. Emission limit values (mg/Nm³) for engines and gas turbines

Pollutant	Type of installation	Liquid fuels	Natural gas	Gaseous fuels other than natural gas
SO ₂	Engines and gas turbines	60 ⁽⁴⁾	-	15
NO _x	Engines	190 ⁽¹⁾⁽⁵⁾	95 ⁽²⁾	190
	Gas turbines ⁽³⁾	75 ⁽⁶⁾	50	75
Particulate matter	Engines and gas turbines	10 ⁽⁷⁾	-	-

⁽¹⁾ 225 mg/Nm³ for dual fuel engines in liquid mode.

⁽²⁾ 190 mg/Nm³ for dual fuel engines in gas mode.

⁽³⁾ Emission limit values are only applicable above 70 % load.

⁽⁴⁾ 590 mg/Nm³ for diesel engines in SIS and MIS as defined in Directive 2009/72/EC

Comment: According to BREF LCP 2006, in apr.6.1.10.3.2 Control of emissions to air from liquid fuel-fired (diesel) engines / Abatement of SO₂ emissions, p. 356:

“The sulphur oxide emission is related to the fuel (proportional to the sulphur content of the fuel). The primary method to reduce the SO_x emissions is to use a fuel with a lower sulphur content, whenever commercially available.”

The ELV of 590 mg/Nm³ corresponds the stoichiometrically to low sulphur HFO (1% w.w), i.e. the minimum content that is available in the Greek market.

⁽⁵⁾ 1300 mg/Nm³ for diesel engines **equal to or** below 20 MW and 1850 mg/Nm³ for diesel engines **equal to or** above 20 MW in SIS and MIS as defined in Directive 2009/72/EC

Comment: The exact wording in the new Goeteborg Protocol for NO_x in this case is:

«Where Selective Catalytic Reduction (SCR) cannot currently be applied for technical and logistical reasons like on remote islands or where the availability of sufficient amounts of high quality fuel cannot be guaranteed, a transition period of 10 years after the entry into force of the present Protocol for a Party may be applied for diesel engines and dual fuel engines during which the following ELVs apply:

- *Dual fuel engines: 1,850 mg/m³ in liquid mode; 380 mg/m³ in gas mode.*
- *Diesel engines — Slow (< 300 rpm) and Medium (300–1,200 rpm)/speed: 1,300 mg/m³ for engines between 5 and 20 MWth and 1,850 mg/m³ for engines > 20 MWth.*
- *Diesel engines — High speed (> 1200 rpm): 750 mg/m³.»*

The term “remote islands” is not defined in the EU legislation or in the Protocol. The common understanding is that it is equivalent to SIS/MIS.

The last indent is not relevant to MCPs.

To our knowledge, there are also commercially available technological solutions for 4 strokes engines that go up to 35 MW.

⁽⁶⁾ 550 mg/Nm³ in SIS and MIS as defined in Directive 2009/72/EC

Comment: Based on the experience of the Greek authorities on gas turbines that operate with diesel oil without excessive water consumption. Smaller ELVs cannot be attained without significantly higher water consumption. This water is not available in most of SIS/MIS.

⁽⁷⁾ 75 mg/Nm³ for diesel engines in SIS and MIS as defined in Directive 2009/72/EC.]

Comment: Based on the experience of Greek authorities on diesel engines that operate with HFO with low ash content. According to BREF LCP 2006, the use of secondary abatement measures for SIS/MIS is not a commercially available option and as primary measure the use of low sulphur and low ash content HFO (1%) is proposed (par. 6.5.5.2 BAT for liquid fuel-fired (diesel) engines / Dust and heavy metals emissions). This view is also supported by EUROMOT in the discussions for the revision of relevant LCP BREF.