Position paper
Directive on emissions from Medium Combustion Plants (MCPs)

European Engine Power Plants Association

EUGINE requests major modifications of the proposal for an MCP directive targeting power plants with a rated thermal input between 1 and 50 MW. Main changes concern the scope, definitions and limit values. As engine power plants are needed to achieve the decarbonisation of Europe's power generation, negative impacts on this technology should be avoided.

1. Engine power plants are key for the EU power system

Engine power plants:

→ run on the full range of low-carbon fuels, from biofuels to all types of gases, including natural, sewage and biogas;

→ are highly efficient, especially in cogeneration applications (CHP: up to 95% energy efficiency);

→ only run when really needed, avoiding unnecessary emissions in idle or minimum-load mode;

→ are highly flexible: they can provide power to the grid within a minute and reach full output within five minutes;

As a consequence, engine power plants are a very useful technology to decarbonise Europe's power production as well as to provide security of energy supply when they are balancing generation variations from intermittent renewables.

2. Problems to be tackled

EUGINE welcomes the intention of the European Commission to complete the regulatory framework on power plants emissions. However, as published, the draft legislation raises major concerns:

2.1 Scope & Definitions

To avoid legal and technical issues as well as unbearable costs, the MCP proposal needs a cost-efficient scope and very clear definitions.

Consequently, EUGINE supports the following amendments:

→ Article 2, point 2: add new bullet point (g) on exemptions:

To avoid excessive costs during the product development phase, this phase should be excluded from the scope (like in the Industrial Emissions Directive -IED- for plants above 50MW), as also requested by the Council of the EU (see "general approach" of 12 December 2014).

"(g) ***research activities, development activities or the testing of new products and processes***;"

→ Article 2, point 2: add new bullet point (h):

Nuclear power plants rely on the power generated by on-site engine power plants for a safe 'black-start' or shut-down. Such systems should be excluded from the scope to avoid extra complexity with related risk for failure. The simplicity of the engine system is key for a safe start. As emergency gensets for nuclear power plants have very few running hours, the environmental impact of such an exemption would be very limited. The environmental impact of a running emergency genset is much lower than the terrible consequences of a nuclear accident.

"(h) ***engines for the use in nuclear power plants***."

→ Article 2, point 2, add new bullet point (i):

Emergency reserve power plants are essential in case of power failures. They are only operating a very limited number of hours per year. For reducing the risk of failures, cost-efficiency and energy-security reasons, they should be excluded from the scope.

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- **The limit values suggested by the Commission would penalise technology that helps to reach the EU targets on decarbonising the energy sector.**
- **Investments in highly efficient combined heat and power generating power plants or biogas plants may be put at risk by this draft legislation.**
- **A number of amendments are needed to exempt safety relevant engine power plants.**

EUGINE is the centre of knowledge for engine power plant technology and electricity market design. Its members are the leading European manufacturers of engine power plants and their key components suppliers. They provide forward-looking solutions for flexible electricity generation.

"***combustion plants which do not operate more than 500 operating hours per year***."

As a consequence, the last paragraphs of article 5 points 2 and 3 should be deleted.

→ Article 3, definitions 5, 8 and 9 to be modified:

As several engines may be combined to build large engine power plants, it is necessary to specify that calculations are made on the basis of single units. The wording should also be improved to better reflect the way the technology works.

(5) "'combustion plant' means any ***identifiable single unit of*** technical apparatus in which fuels are oxidised in order to use the heat thus generated."

(8) "'engine' means a ***single*** gas engine, diesel engine or dual fuel engine ***that provides mechanical power output from a crankshaft***"

(9) "'gas engine' means an internal combustion engine which operates according to the Otto cycle and uses ***an external ignition device such as a spark plug as ignition source*** to burn fuel."

→ Article 5, point 7 to be completed:

To take into account the possible case of gas shortages, a derogation should be added (like in the IED directive).

"***A Member State may derogate from the obligation to comply with the emission limit values for combustion plants using gaseous fuel which have 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. The exception time period shall not exceed 10 days except where there is an overriding need to maintain energy supplies***."

→ Article 5, point 9 (new) to be added:

To avoid rules circumventions through the combination of several engines with a rated thermal input just below the threshold defined by the proposal (e.g. 990kW), a specific aggregation rule should be added into the text, in line with the position of the Council of the EU:

"***For the purpose of calculating the total rated thermal input of a combination of combustion plants, individual combustion plants with a rated thermal input below 1 MW shall not be considered unless multiple MCPs are installed for the same purpose on a single site in a load-sharing arrangement. In this case the load-sharing combination formed by such plants shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input even if each individual MCP has a rated thermal input below 1 MW***."

2.2 Emission Limit Values (ELVs) of Annex II

EUGINE strongly recommends the adoption of ELVs taking into account:
- the internationally agreed UNECE Gothenburg Protocol;
- the Emission Limit Values (ELVs) already adopted for Large Combustion Plants (LCPs, above 50 MW): ELVs for MCPs should not be stricter than the ones for LCPs;
- the major changes occurring in the power sector;
- cost-efficiency reasons and technological feasibility;
- the situation of remote areas such as small islands (technical and logistical difficulties to apply Selective Catalytic Reduction – SCR; lower quality fuel).

Regarding specific values EUGINE recommends the adoption of the ELVs proposed by EUROMOT.

2.3 Benchmark Values – Annex III

EUGINE recommends to delete definition 19 in article 3, point 4 in article 5 and the complete Annex III, as also requested by the Council of the EU.
The highly efficient gas engine power plants used for a combined heat & power generation (CHP) would need to be modified, requiring considerable additional investments by the operators and by this would become economically unattractive. These CHP plants are an important contribution for reducing greenhouse gas emissions. Making CHP plants economically unattractive sets the wrong incentives for a decarbonisation of the energy generation. Also engine power plants running on other gases like biogas cannot apply secondary abatement, as the impurities would destroy the SCR systems. The suggested limit values therefore cannot be achieved. Finally, taking into account the important role of engine power plants and the marginal impact of MCP's emissions in the so-called "zones not complying with EU air quality limit values laid down in directive 2008/50/EC" as well as the subsidiarity principle, EUGINE recommends to delete the above mentioned paragraphs.

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