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Electricity Market Design: Any threshold requires an appropriate calculation methodology

In view of the upcoming trilogue on the Electricity Market Design, COGEN Europe, EUGINE and EUTurbines would like to strongly emphasise that the simple reference to a limit value like the 550g CO_2/kWh - or its possible alternatives - is not sufficient: **Without defining a harmonised calculation methodology, the new provision risks leading to a patchwork of national calculation methodologies** enabling some EU Member States to potentially support high-emitting power plants through capacity mechanisms. On the other side, it could in some other Member States create challenges for solutions which are needed to fight climate change, e.g. biogas and cogeneration plants. A non-harmonised calculation methodology would undermine the necessary level playing field within the internal market.

Special attention should be given to two increasingly important and specific solutions:

- Biogas: this renewable fuel represents a great opportunity to make use of existing methane coming from biomass and to transform it into renewable electricity and heat. As a renewable gas, biogas is supported by the EU renewable energy directive and it is supposed to become more and more important in the future when gas power plants will increasingly switch from natural gas to renewable gases, such as biogas. Biogas makes an efficient use of existing methane: it is CO_2 neutral (as it transfers CO_2) with regard to the whole life-cycle. However, the biogas itself has a relatively high CO_2 content which means that, depending on the calculation methodology applied, it could lead to emissions beyond the 550g CO_2/kWh limit.

- Cogeneration: simultaneous production of electricity & heat provides very high energy efficiency rates (up to 95%). High efficiency cogeneration is therefore recognised in the EU Energy Efficiency Directive (Articles 14 & 15), as a key efficiency and decarbonisation solution for the future energy system, with an important growth potential in the decades to come. Cogeneration is only installed where there is a significant heat demand. Heat-driven cogeneration plants are designed to provide as much heat and as efficiently as possible - which leads to lower electricity production. If the CO_2 emissions of cogeneration are calculated by only taking the electricity production into account

(assuming no emissions for the heat), cogeneration plants will be discriminated and their potential contribution to the decarbonisation, efficiency and flexibility of the energy system will be under-estimated.

Therefore, the new provision should not apply to renewable fuels like biogas. In addition, an adequate method to assess emissions from high-efficiency cogeneration plants should be determined, which takes into account that cogeneration produces both useful heat and electricity.

Although the lack of a proper calculation methodology has been identified by some of the negotiators, a number of pending issues still have to be solved. **We therefore urge decision-makers to define a proper calculation methodology by:**

- Either empowering the European Commission to adopt a delegated act (in article 23)

- Or adding a new annex to the electricity regulation (see proposal enclosed)

Both solutions should ensure a clear, predictable and consistent implementation of the new provision. Should you have any question, please let us know. We remain at your disposal for any precision.

Ralf Wezel	Hans Korteweg	Ralf Wezel
Secretary General	Managing Director	Secretary General
EUGINE	COGEN Europe	EUTurbines

EUGINE
is the voice of the European engine power plants industry, representing the leading European manufacturers of this flexible, energy-efficient, reliable and environmentally sound technology. Engine power plants are an optimal solution for both backing-up and generating renewable energy (e.g. with biogas), cogeneration applications as well as to ensure security of supply.
For more information please see www.eugine.eu

COGEN Europe
COGEN Europe, the European Association for the Promotion of Cogeneration, is the cross-sectoral voice of the cogeneration industry. The cogeneration sector is committed to the creation of a resilient, decentralised and carbon neutral European energy system by 2050 with cogeneration as its backbone, empowering European citizens and industry to generate their own efficient, reliable and affordable clean heat and power locally.
For more information please see www.cogeneurope.eu

EUTurbines
is the only association of European gas and steam turbine manufacturers. Its members are Ansaldo Energia, Doosan Skoda Power, GE Power, MAN Energy Solutions, Mitsubishi Hitachi Power Systems, Siemens and Solar Turbines. EUTurbines advocates an economic and legislative environment for European turbine manufacturers to develop and grow R&I and manufacturing in Europe and promotes the role of turbine-based power generation in a sustainable, decarbonised European and global energy mix.
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NEW ANNEX

CALCULATION METHODOLOGY FOR THE EMISSION LIMIT

The emission limit for generation capacity eligible to participate in capacity mechanisms as referred to in Article 23 shall be calculated based on the design efficiency of the generation unit, meaning the net efficiency at nominal capacity under the relevant ISO conditions[1]. For highly efficient cogeneration as defined in Article 2(34) of Directive 2012/27/EU both useful heat and power output must be considered in the calculation of the specific emissions.

Generation capacities operated with waste or renewable fuels shall not be subject to the emission limit.

[1] For calculating efficiency of generation capacity, please refer to ISO standards 19859 for gas turbines, 3046 for gas engines, XXXXXX for other technologies.