

Response to ACER Public Consultation on its draft opinion providing technical guidance on the calculation of the values related to CO₂ Emission Limits in Capacity Mechanisms

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About Energy UK

Energy UK is the trade association for the energy industry with over 100 members spanning every aspect of the energy sector – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership.

We represent the diverse nature of the UK's energy industry with our members delivering almost all (90%) of both the UK's power generation and energy supply for over 27 million UK homes as well as businesses.

The energy industry invests over £13.1bn annually, delivers around £85.6bn in economic activity through its supply chain and interaction with other sectors, and supports over 764,000 jobs in every corner of the country.

Response to consultation questions

3. Consultation Topic 1: Scope of the Technical Guidance

Q3.1. Please provide your comments on Section 5 of the draft Opinion.

Energy UK has significant concerns around the scope of the guidance in relation to emissions covered and generation capacity to which the emission limit is applied. The purpose of the guidance, as specified under Article 22 of the recast Electricity Regulation is to provide "*technical guidance related to the calculation of the values referred in the first subparagraph*". Therefore as a point of principle, the guidance should not increase the scope of the Regulation, which only specified a limit on CO₂, by including other Greenhouse Gases (GHGs) such as nitrous oxide and methane.

Furthermore, the wording of the guidance needs modifying to clarify exactly what "generation capacity" the emission limits apply to. We suggest modifications are made to ensure that:

- The CO₂ emission limits apply only to the generation capacity that is subject to a capacity mechanism (i.e. under the Capacity Market (CM) for the UK). This generation capacity can be either a single generation unit or a set of generation units. The limits should not apply to any other co-located generation capacity that is not participating in the CM as such capacity is not subject to the Regulation.
- The criteria are met by all individual units participating in the CM within the generation capacity unless it is not technically possible to operate the units independently. This avoids the potential to average a lower performing unit with a higher performing unit (e.g. different units/fuels that might have a CO₂ intensity above the emission limit threshold), which would be at odds with the intent of the Regulation.
- The criteria are not applied to generation units that are outside of the capacity mechanism as this would go beyond the scope of the Regulation.
- For existing plant emitting over 550g/kWh there is the option to comply via the 350kg/kWe/year route, ACER guidance should reflect the need for emissions to remain at or below a level consistent with the threshold only for periods during which capacity payments are being received.

4. Consultation Topic 2: Emission Calculation Issues

Q4.1. Please provide your comments on Section 6 of the draft Opinion.*Greenhouse gases other than CO₂*

Whilst we agree that non-CO₂ greenhouse gas emissions are important, and contribute to global warming, as a point of legal principle the guidance should be limited to the scope of the Regulation (2019/943). As stated in response to Question 3.1, the purpose of the guidance is specified under Article 22 of the recast Electricity Regulation as “*providing technical guidance related to the calculation of the values referred in the first subparagraph*”. Given that the Regulation explicitly limits considerations to fossil fuel-derived CO₂ emissions from generating units, there is no legal basis to justify the inclusion of other greenhouse gases within ACER’s guidance. Therefore, we do not support the inclusion of nitrous oxide and methane as this goes beyond the scope of the original Regulations (2019/943).

Combined heat and power (CHP)

We consider the current drafting of Section 6 to be fundamentally flawed and to ultimately result in the potential discrimination of high efficiency CHPs. If a CHP’s generation for both electricity and steam purposes are not included in the cap, emissions will appear far greater than is actually the case. This was raised in the earlier Eurelectric submission (Issue 5 on page 13 of the submission). Failure to account properly for the component of fuel used for heat generation could result in a plant with an overall efficiency of approx. 80% being ineligible for a CM agreement. This is not the level playing field that the document is aiming for. Crucially, some of the most efficient power stations on the system, supporting heat networks and transition to low carbon, will be excluded from the capacity market.

The final paragraph of Section 6.7 states “*It is finally noted that the specific objective to enhance a process of transition towards a more efficient energy system, including electricity, heating and cooling transformation, transmission and distribution, together with a more efficient energy consumption is specifically addressed in Directive 2012/27/EU (Energy Efficiency Directive).*” This is disingenuous because the Energy Efficiency Directive requirements only relate to new plant operating above 1500 hrs per year. A lot of installations bidding for CM agreements will either operate below this threshold or are already in operation. This statement is therefore unhelpful.

Regarding the proposed inclusion of waste to energy, it is not appropriate to diverge from the EU ETS, the main mechanism for controlling carbon emissions across Member States. As such, waste to energy should not be covered by this Regulation as it is not included within the EU ETS. The UK Government, when implementing this regulation, has used a definition of ‘fossil fuel’ which does not capture waste to energy. Energy UK considers this an appropriate approach to take.

5. Consultation Topic 3: Calculation Formulae**Q5.1 Please comment on the suggested approach to calculate the Specific Emissions of the generation capacity**

The calculation methodology set out in Section 7.1 includes GHGs other than CO₂. As noted in our response to Question 3.1 the Guidance needs to strictly adhere to the scope of the Regulation which only specified CO₂ emissions and therefore references to other species should be removed.

We would also support the interpretation of “design efficiency” to account for upgrades and modifications to plant (i.e. design efficiency can be changed if a plant is upgraded). This interpretation can be seen in environmental legislation which allows reassessment after significant changes are made to the plant.

Q5.2 Please comment on the suggested approach to calculate the Total Emissions of the generation capacity

As the Regulation itself specifies that emission values “shall be calculated based on design efficiency”, Energy UK would request that any reference to historical emissions is removed from the Guidance. “Design efficiency” is directly specified in the Regulation and there are good reasons for this approach

to be the basis rather than “operational efficiency” as this can vary depending on the role of the plant and load profiles, particularly as these may change over the operational lifetime of a generating unit. Using design efficiency is also analogous to the approach used in environmental legislation where “nameplate” efficiency is used. This “nameplate efficiency” must be verified after commissioning or after significant changes by performance test under specified (full load) conditions. The design efficiency measure should be used to determine compliance against both the 550g/kWh limit and the 350kg/kWe/year limit.

The guidance needs to align with this principle. We do not agree with the proposal to use historical measures of generation and fuel use to demonstrate compliance with the emission limit standards as this is clearly inconsistent with the requirement within the Regulation to use “design efficiency”. We also note that historic performance is rarely an accurate guide to future performance. This is particularly the case for thermal plant as we move through the energy transition and the regulatory context evolves. This text should be replaced by text that sets out a methodology for deriving a limit to MWh from the design efficiency, emission factor for the fuel in question (Annex VI EC 2018/2066) and capacity, as proposed in Eurelectric’s suggestions for guidance shared with ACER.

6. Consultation Topic 4: Documentation and Monitoring

Q6.1 Please provide your comments on Section 8 of the draft Opinion.

Energy UK does not deem it feasible at the pre-qualification stage for a new build to supply the information listed in Table 3 of the Guidance. There needs to be flexibility for the relevant authorities in each Member State to determine the appropriate way of demonstrating that the requirements of the Regulation have been met. Furthermore, the information specified needs to relate to the requirements of the Regulation to avoid excessive administrative burden for participating organisations.

Historical fuel use and electricity produced are not relevant with reference to the requirement to demonstrate compliance based on the “design efficiency”, whereas a plant specification (new plant) or a performance test after commissioning (existing plant) would. For existing plant using the limit of 350 kg CO₂ average per year per installed kWe, a commitment from the operator is needed that they will keep their MWh below the level commensurate with the annual limit for their design efficiency and fuel emission factor.

Q6.2 Please provide your comments on Section 9 of the draft Opinion.

Given the view stated earlier in our response, that waste to energy should not be included within the scope of this Regulation, any reference to a special monitoring regime for waste to energy should also be removed.

While Energy UK agrees that monitoring arrangements need to ensure no fraudulent activity takes place, the requirements need to relate to the requirements of the Regulation. For new plant, therefore, the checks need to relate to verification of the design efficiency and fuel emission rate. For existing plant using the limit of 350 kg CO₂ on average per year per installed kWe, the checks also need to include verifying MWh generated and capacity. Existing environmental legislation already regulates efficiency and operational hours with reporting of these parameters.

Verification

The draft opinion proposes that monitoring at the end of the delivery period of the CM should be verified by EU ETS verifiers. This is unnecessarily onerous for the purpose of compliance with a design efficiency-determined cap on generation.

Data from the EU ETS verification process would not be suitable for this purpose as not all generation units holding CM contracts are within the scope of EU ETS, the data reflects operational performance as opposed to a measure against design efficiency, and finally the cap is applied at the unit level while

EU ETS data is more commonly derived at a site level. Consequently, there would be the need to invest in additional monitoring equipment at significant cost. Furthermore, the CM year may not be the same as the EU ETS year, which follows the calendar year. For example, the GB CM delivery year operates from October to September.

Any additional verification process would introduce a significant additional regulatory burden and instead compliance could be self-declared by a CM participant against its generation cap, which could be subject to audit by the competent authority. Particularly if there are incentives to ensure compliance in the design of a Member State's CM, such as financial penalties or termination events.

Verification processes also need to take account of CM participants' ability to trade relevant obligations; these rights themselves are also enshrined in the Regulation (clause 22(3)(c)). Trading may result in an obligation being acquired/held for very short periods within a year.

7. Conclusion

Q7.1 Please provide any further comment on the draft Opinion

None to add.

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