



**Single Electricity Market
(SEM)**

Capacity Market

**Technical Guidance for determining CO₂ Emissions for
Compliance with the Clean Energy Package**

Information Note

SEM-20-036

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1. OVERVIEW

1.1 ABSTRACT

- 1.1.1 The purpose of this information paper is to provide the rationale behind the Technical Guidance for determining CO₂ Emissions for Compliance with the Clean Energy Package.
- 1.1.2 As part of the Capacity Market Code Modification *CMC_05_20 - Modification to Implement Requirement of Clean Energy Package Regulation EU 2019/943* a number of participants highlighted concerns with areas where the ACER opinion was unclear. To mitigate this ambiguity the Regulatory Authorities amended the proposal to introduce the concept of technical guidance in sub-section D.4.1 of the Code.
- 1.1.3 The draft Technical Guidance was included with the consultation paper SEM-20-023¹ with the intention being to ensure that all Applications for Qualification are made and validated on a consistent basis.
- 1.1.4 Following the consultation period closure date a number of respondents raised concerns with the timelines for the turnaround for the proposal, particularly with regards to the Technical Guidance, given its significance.
- 1.1.5 As a result of these concerns, several respondents gave a preference for the decision paper to only cover off those amendments that were required to the CMC specifically in relation to the T-4 CY2023/24 capacity auction due to take place on 27 April 2020.
- 1.1.6 The RAs agreed with this and allowed respondents additional time for further consideration of the technical guidance.
- 1.1.7 Following this additional period to allow for Industry feedback and taking account of the responses received, the SEM Committee hereby today publish the Technical Guidance for determining CO₂ Emissions for Compliance with the Clean Energy Package, as referenced in sub-section D.4.1 of the Code, which is given in Appendix A.

¹ <https://www.semcommittee.com/publications/sem-20-023-capacity-market-code-working-group-12-urgent-modification-consultation-paper>

1.2 GENERAL PRINCIPLES

- 1.2.1 Wherever possible, and both appropriate and relevant to the SEM, the technical guidance follows the recommendations set out in ACER Opinion 22 of 2019 dated 17 December 2019.
- 1.2.2 This technical guidance is only intended to cover the requirements to determine the compliance of CO₂ emissions with the limits set out in Article 22(4) of the CEP Regulation 2019/943 for the purpose of Qualification under the Capacity Market Code. This guidance will apply, in the first instance, to the CY2024/25 T-4 Auction.
- 1.2.3 The RAs recognise that changes to the broader context of the SEM may lead to changes in unit operating regimes between qualification and the start of delivery under the CMC, especially in the case of a T-4 Auction.

Such changes, along with potential changes to units themselves, could produce a requirement to re-validate compliance with the CO₂ limits after Qualification though such changes have not, at this time, been recognised in the ACER Opinion.

- 1.2.4 The ACER Opinion does recognise a limited range of circumstances in which ex-post validation of compliance with the CO₂ Limits is recommended. The RAs note that there may exist grounds to consider wider application of ex-post validation.
- 1.2.5 Any validation of CO₂ emissions against CO₂ Limits after Qualification, and particularly after the Auction, would require more substantive changes to the Capacity Market Code and/or the Trading or Settlement Code. Such changes may, among other things, need to set out how to treat a unit which Qualified and has been Awarded Capacity but which fails such later validation.
- 1.2.6 The RAs intend to consult on the basis on which units' compliance with CO₂ Limits should be validated after Qualification and/or Auction and the consequences of any non-compliance identified at that time.
- 1.2.7 The ACER Opinion sets out, in chapter 8, a recommendation for third party verification of emissions data. This same section allows for units of less than 5MW to self-certify to avoid creating a barrier to the participation of such capacity.
- 1.2.8 For the CY2024/25 T-4 Auction, the RAs have decided that the existing process of self-certification of emissions used in the CY2023/24 T-4 Auction will continue to be used, albeit with the increased Qualification Data requirements set out in CMC_5_20 (SEM-20-028). The RAs intend to review the use of third party verification before the CY2025/26 T-4 Auction and intend to consult on this in sufficient time to have their decision in place before Qualification opens for that auction.

1.3 SPECIFIC GUIDANCE

- 1.3.1 The RAs have decided that Annual Emissions should be determined on the basis of the latest three calendar years of historic data. This is consistent with the ACER Opinion and avoids the potential issue of one-off effects on the market or specific units in any one year unduly impacting the assessment of Annual Emissions.
- 1.3.2 Where less than three, but at least one, year of historic data is available this should be used for the determination of Annual Emissions.
- 1.3.3 The ACER Opinion recognises that periods when a unit is under test, including in the SEM context tests of secondary fuel capability, should be excluded in the determination of Annual Emissions. The RAs have extended this principle to cover the fuel share when operating under Secondary or Back-up Fuel (as per the relevant Grid Code) in both the determination of Specific and Annual Emissions. We do not consider it appropriate for the CRM to create material additional costs for units attempting to comply with legitimate directions from the SOs during a fuel security event.
- 1.3.4 Consistent with decision SEM-13-006 (para 6.3.4), the RAs recognise that that it is appropriate that "... the extent to which WtE [waste to energy] plants result in avoided emissions (CO₂ equivalent) from landfills is reflected in emissions figures...". This decision was made in the context of priority dispatch but also makes sense in the context of the objective of the CEP to contribute to a reduction in CO₂e emissions. Without such recognition, implementation of the CEP could lead to an overall increase in CO₂e emissions.
- 1.3.5 The technical guidance requires that the emissions saving for WtE units should be determined in line with the IPCC Waste Model², though should only consider the savings that occur during the operating life of the WtE unit.
- 1.3.6 For co-generation units, the production of heat and electricity from a common process results in lower CO₂ emissions than would be achievable from separate production processes. While the ACER Opinion does mention cogeneration, its recommendations are liable to a range of interpretations and under some potential interpretations could lead to an overall increase in CO₂ emissions.
- 1.3.7 The RAs have decided that the calculation of CO₂ emissions of co-generation units should take account of the input fuel which relates to the production of heat rather than electricity. There are a number of recognised methods to make this determination. The technical guidance uses the "heat bonus" method which has the advantage of simplicity and reduces the use of parameters which may be difficult to determine and validate. The "heat bonus" method uses the published BAT (Best Available Technology) efficiency of heat production to determine the proportion of the input fuel of a co-generation unit to allocate to heat.

² https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/IPCC_Waste_Model.xls