



**Single Electricity Market  
(SEM)**

**Capacity Remuneration Mechanism (CRM)**

**Interaction of Clean Energy Package Emission Limits  
and the T-4 CY2023/24 Capacity Auction**

**Information Paper**

**SEM-19-074**

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# 1. ELECTRICITY REGULATION (EU) 2019/943

1.1.1 On 4 July 2019, the Electricity Regulation<sup>1</sup> came into effect as part of the EU's Clean Energy Package<sup>2</sup>. Article 22 of the Electricity Regulation outlines design principles for capacity mechanisms in EU Member States including requirements in respect of existing capacity mechanisms.

1.1.2 This information paper is specifically focused on the emission limits specified in Article 22 (4) and (5) of the Electricity Regulation, which states the following:

## **Article 22**

### ***Design principles for capacity mechanisms***

*4. Capacity mechanisms shall incorporate the following requirements regarding CO<sub>2</sub> emission limits:*

*(a) from 4 July 2019 at the latest, generation capacity that started commercial production on or after that date and that emits more than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity shall not be committed or to receive payments or commitments for future payments under a capacity mechanism;*

*(b) from 1 July 2025 at the latest, generation capacity that started commercial production before 4 July 2019 and that emits more than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity and more than 350 kg CO<sub>2</sub> of fossil fuel origin on average per year per installed kWe shall not be committed or receive payments or commitments for future payments under a capacity mechanism.*

*The emission limit of 550 g CO<sub>2</sub> of fossil fuel origin per kWh of electricity and the limit of 350 kg CO<sub>2</sub> of fossil fuel origin on average per year per installed kWe referred to in points (a) and (b) of the first subparagraph shall be calculated on the basis of the design efficiency of the generation unit meaning the net efficiency at nominal capacity under the relevant standards provided for by the International Organization for Standardization. By 5 January 2020, ACER shall publish an opinion providing technical guidance related to the calculation of the values referred in the first subparagraph.*

*5. Member States that apply capacity mechanisms on 4 July 2019 shall adapt their mechanisms to comply with Chapter 4 without prejudice to commitments or contracts concluded by 31 December 2019.*

1.1.3 Article 22 (4) makes reference to ACER publishing technical guidance in January 2020 in relation to the calculation of the emissions values. ACER published a draft opinion of this technical guidance in September for comment and provided the RAs with the final opinion on 17 December 2019 (which will be published on the ACER website<sup>3</sup>). This final opinion has

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<sup>1</sup> Regulation (EU) 2019/943 <https://eur-lex.europa.eu/eli/reg/2019/943/oj>

<sup>2</sup> <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans>

<sup>3</sup> [https://acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Pages/Publications.aspx](https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Publications.aspx)

informed the approach set out in this information paper in advance of the T-4 CY2023/24 capacity auction being held in March 2020.

- 1.1.4 These emissions limits will affect coal, diesel and possibly some older gas generation. It should also be noted that the ACER technical guidance final opinion refers to back-up generation linked to demand side response participation in capacity mechanisms also being subject to the emissions limits introduced in Article 22 of the Electricity Regulation.
- 1.1.5 As per Article 22 (5), compliance with the emissions limits specified is required after 31 December 2019. Therefore capacity contracts put in place after this date will be subject to the above limits.

## 2. T-4 CY2023/24 CAPACITY AUCTION

2.1.1 This section provides the background and process steps taken to date. This provides the context for the approach the RAs will be taking specifically for the T-4 CY2023/24 capacity auction given the Electricity Regulation 2019/943 came into effect during this process.

2.1.2 This is best illustrated in the timeline below which shows the Electricity Regulation 2019/943 interactions in red, with particular focus on new capacity applications given the emission limits bind on any new capacity seeking a Reliability Option in the T-4 CY023/24 capacity auction:

Date	T-4 CY2023/24 Process
16/05/2019	SEMC Parameters Consultation Published (SEM-19-023) → Electricity Regulation 2019/943 05/06/2019
28/06/2019	SEMC Parameters Consultation Closed; Responses Received → New Capacity from 4/7/2019 emission limits
30/08/2019	SEMC Publish New Capacity application forms (multi-year ROs) (SEM-19-041)
10/09/2019	SEMC Parameters Decision Published (SEM-19-043)
13/09/2019	Auction Qualification window opens following publication of Initial Auction Info Pack → Draft ACER technical guidance published for comment
10/10/2019	Auction Qualification window closes; all applications received including New Capacity
19/12/2019	Provisional Qualification Results Date → ACER final technical guidance on calculation of emission limits due 5/1/2020
05/03/2020	Final Qualification Results Date and Publication Date
19/03/2020	Auction Date

2.1.3 The RA's preparation for the T-4 CY2023/24 capacity auction commenced early 2019, which informed the proposals within the auction parameters consultation paper, published in May 2019. The Electricity Regulation 2019/943 dated 5 June 2019, introduces CO<sub>2</sub> emission limits for the participation of generation capacity in capacity mechanisms. The intent is therefore to avoid capacity payments being made to generation capacity which does not meet the requirements.

2.1.4 While the Electricity Regulation introduces overarching CO<sub>2</sub> emission limits for both new capacity (commissioned after 4 July 2019) and for existing capacity (after 1 July 2025), it did recognise the need for detailed technical guidance to inform the calculation of the emissions limits at a unit level, and stated that ACER would be publishing such guidance by 5 January 2020.

2.1.5 The qualification window opened in September 2019 and during this time ACER published its draft opinion on the technical guidance for feedback. The final ACER technical guidance on the calculation of the emissions limits for capacity mechanisms has been issued to the RAs on 17 December 2019 and is due to be published by 5 January 2020.

2.1.6 Given the opinion on the ACER technical guidance has just been finalised on 17 December 2019, and the proximity of the T-4 CY2023/24 capacity auction, the RAs will take a pragmatic interim approach which is outlined in the following section.

### 3. APPROACH FOR T-4 CY2023/24 NEW CAPACITY EMISSIONS LIMITS

- 3.1.1 In order to give effect to the new capacity emission limits in Article 22 (4) of the Electricity Regulation 2019/943 in the forthcoming T-4 capacity auction for the Capacity Year 2023/24, the RAs propose the following approach.
- 3.1.2 This approach takes into consideration the ACER final opinion on the technical guidance for calculating the emissions limits together with the proximity of the capacity auction scheduled for 19 March 2020. The approach is in two broad stages:
- Pre-qualification stage; and
  - Substantial Completion stage.
- 3.1.3 As the window for applying to qualify for this T-4 capacity auction closed on 10 October 2019, all new capacity applicants are now known. New capacity applicants submitted applications to the TSOs, those applicants seeking a multi-year Reliability Option also applied to the RAs seeking approval for a multi-year RO as part of the qualification process. The RAs will in the very near future be writing directly to all parties who made new capacity applications, outlining the emission limits placed on new capacity after 4 July 2019 in the Electricity Regulation 2019/943, providing a link to the latest available ACER technical guidance on the calculation of emissions limits and requesting a signed Director's Certificate.
- 3.1.4 Applicants will be required to submit a signed Director's Certificate with the intention of acknowledging the emission limits set out in the Electricity Regulation 2019/943 and a declaration that the new capacity to be commissioned will be compliant with these requirements. This also includes new Demand Side Units and the need for their back-up generation to comply with the emissions limits for new capacity.
- 3.1.5 Draft wording on the compliance of New Capacity being sought from the Director's Certificate is provided in Appendix A and will also be provided with each letter issued. For parties with multiple new capacity applications, each new capacity application must be referenced within the signed Director's Certificate.
- 3.1.6 Separately, the RAs understand that existing Demand Side Units in the SEM capacity market may also be bound by the new capacity emissions limits if they are linked to a new back-up generation unit for the T-4 CY2023/24 capacity auction. The RAs will also be writing to all existing Demand Side Units in the SEM capacity market seeking confirmation in the form of a Director's Certificate regarding new back-up generation. Draft wording on the Existing Demand Side Unit compliance being sought from the Director's Certificate is provided in Appendix B and will also be provided with each letter issued.
- 3.1.7 Similarly the RAs understand that existing Aggregated Generator Units (AGU) may also be bound by the new capacity emissions limits if a new generating unit is to be aggregated to the AGU and seeking to qualify for the T-4 CY2023/24 capacity auction. Therefore the RAs will also

be writing to existing AGUs in the SEM capacity market seeking similar confirmation in relation to the new capacity emissions limits.

- 3.1.8 The Final Qualification Results will be presented to the February SEM Committee meeting for approval, with publication expected 5 March 2020 in line with the published timetable<sup>4</sup>. In order for the RAs to review, prepare and submit the appropriate material for the February SEM Committee meeting these Director's Certificates must be received by the RAs no later than Friday 31 January 2020. Further detail will be provided in the letters to be issued.
- 3.1.9 Should applicants fail to submit a suitable Director's Certificate, the RAs will take the conservative approach of not qualifying the new capacity for participation in the T-4 CY2023/24 capacity auction.
- 3.1.10 All applicants will receive their final qualification results on 5 March 2020 in advance of the capacity auction being run on 19 March 2020.
- 3.1.11 The RAs will also be raising modifications in early 2020 to update the Capacity Market Code to incorporate the relevant requirements of the Electricity Regulation 2019/943. This is to update who can participate in capacity auctions (reflecting emissions limits) and also to update the criteria to achieve the Substantial Completion milestone. The purpose of this is to ensure the new capacity built meets the emissions limits required in order to be eligible to receive the capacity revenue.

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<sup>4</sup> [https://www.sem-o.com/documents/general-publications/2023-2024-T-4-Capacity-Auction-Timetable\\_CAT2324T-4.pdf](https://www.sem-o.com/documents/general-publications/2023-2024-T-4-Capacity-Auction-Timetable_CAT2324T-4.pdf)

## 4. EXPECTATION FOR FUTURE CAPACITY AUCTIONS

- 4.1.1 While this information paper specifically relates to the forthcoming T-4 CY2023/24 capacity auction, it is useful to provide a high level overview of the enduring changes required for future capacity auctions in order to implement the emissions limits within the Electricity Regulation 2019/943.
- 4.1.2 A further T-4 capacity auction is expected to be held in Q4 2020 and will relate to the Capacity Year 2024/25. From the perspective of the emissions limits, this auction is important as it will also capture existing capacity which must comply with the tighter emissions limits set out in Article 22 (4) of the Electricity Regulation from 1 July 2025 (part way through the capacity year). The RAs may consult on options for addressing this requirement on existing capacity during 2020.
- 4.1.3 Furthermore, the RAs will continue to prepare the enduring arrangements which are to apply to both new capacity and existing capacity seeking capacity revenue in the future. This may require the following:
- Modifications to the Capacity Market Code, which may include but not limited to,
    - Pre-qualification requirements
    - Substantial Completion milestone criteria
    - Ex-post validation
  - Amendments to the de-rating methodology;
  - Amendments to TSOs Capacity Market application process; and
  - Amendments to the RAs New Capacity Application Template (for multi-year ROs).



## 5. NEXT STEPS

- 5.1.1 The RAs will write directly to New Capacity applicants, existing DSUs and existing AGUs, in the T-4 CY2023/24 capacity auction, seeking a signed Director's Certificate re compliance with the new emissions limits. A response will be required by the RAs by Friday 31 January 2020 in order to qualify for the T-4 CY2023/24 capacity auction.
- 5.1.2 The RAs may consult on the wider implications of the Clean Energy Package on the Capacity Market, particularly for the T-4 CY2024/25 capacity auction in Q4 2020 for which the emission limits associated with existing capacity bind on 1 July 2025 (mid capacity year).
- 5.1.3 The RAs will propose modifications to the Capacity Market Code to reflect the emission limits required to be met for future capacity revenues to be secured. This will include, but may not be limited to, the following aspects of the Code:
- Pre-qualification requirements
  - Substantial Completion milestone criteria
  - Ex-post validation as required by ACER.

## 6. APPENDIX A: EXAMPLE OF NEW CAPACITY DIRECTOR'S CERTIFICATE

### SEM Capacity Market

**Director's Certificate in respect of New Capacity Application for the Capacity Year 1 October 2023 to 30 September 2024 in respect of Emissions Limits set out in the Electricity Regulation 2019/943.**

[Name of applicant]

[Address of applicant]

The following confirmations and declarations are made with respect to

[List each Candidate Unit/Capacity Market Unit (or unique reference which aligns with the New Capacity application already made) which is to be covered by this Director's Certificate]

In relation to the above mentioned units, I hereby confirm that, having made due and careful enquiry and to the best of my knowledge, information and belief:

- (i) Acknowledge the Emissions Limits set out in the Electricity Regulation 2019/943 and the corresponding ACER technical guidance on the calculation of these emissions limits.
- (ii) Confirm that the above mentioned new capacity unit(s) (including where applicable back-up generation for demand response) will not at any time emit more than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity as specified in the Electricity Regulation 2019/943.

[Signed]

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[Print Name]

Director

Date: [Date Signed]

## 7. APPENDIX B: EXAMPLE OF EXISTING DSU (RE NEW BACK-UP GENERATION) DIRECTOR'S CERTIFICATE

### SEM Capacity Market

**Director's Certificate in respect of Existing Demand Side Unit Capacity Application for the Capacity Year 1 October 2023 to 30 September 2024 in respect of Emissions Limits set out in the Electricity Regulation 2019/943.**

[Name of applicant]

[Address of applicant]

The following confirmations and declarations are made with respect to

[List each Capacity Market Unit which is to be covered by this Director's Certificate]

**[2 options are provided below, delete as appropriate]**

In relation to the above mentioned units, I hereby confirm that, having made due and careful enquiry and to the best of my knowledge, information and belief:

- (i) Acknowledge the Emissions Limits set out in the Electricity Regulation 2019/943 and the corresponding ACER technical guidance on the calculation of these emissions limits.
- (ii) Confirm that the above mentioned existing Demand Side Unit(s) does/do not have any new back-up generation unit seeking to take part in the T-4 CY2023/24 capacity auction.

**OR**

In relation to the above mentioned units, I hereby confirm that, having made due and careful enquiry and to the best of my knowledge, information and belief:

- (i) Acknowledge the Emissions Limits set out in the Electricity Regulation 2019/943 and the corresponding ACER technical guidance on the calculation of these emissions limits.
- (ii) Confirm that the above mentioned existing Demand Side Unit(s) does/do have new back-up generation unit(s) seeking to take part in the T-4 CY2023/24 capacity auction which represents [XX] MW of initial capacity with the T-4 CY2023/24 capacity application.
- (iii) Confirm that the above mentioned new back-up generation unit(s) will not at any time emit more than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity as specified in the Electricity Regulation 2019/943.

**OR**

Confirm that new back-up generation units(s) representing [XX] MW of initial capacity within the T-4 CY2023/24 capacity application be removed and the amount of initial capacity being sought to qualify in the T-4 CY2023/24 capacity auction is amended to [XX] MW.

[Signed]

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[Print Name]

Director

Date: [Date Signed]