

**ACER Decision on technical specifications for cross-border participation in
capacity mechanisms: Annex I**

**Technical specifications for cross-border
participation in capacity mechanisms**

in accordance with Article 26(11) of Regulation (EU) 2019/943 of
the European Parliament and of the Council of 5 June 2019 on the
internal market for electricity

22 December 2020

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Whereas

- (1) This Annex sets out technical specifications for direct cross-border participation in capacity mechanisms (CMs) in accordance with Article 26(11) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity¹ (Electricity Regulation).
- (2) Article 26 of the Electricity Regulation provides a legal framework for direct cross-border participation of capacity providers in CMs. It mandates the European Network of Transmission System Operators for Electricity (ENTSO-E) to specify certain elements of this framework and submit them to ACER for approval, subject to amendments where necessary. These elements are listed in Article 1² and consist of methodologies, common rules and terms of operation, hereinafter collectively referred to as ‘technical specifications’.
- (3) These technical specifications take the provisions of the Electricity Regulation and the relevant EU legislation into account, in particular:
 - a. Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (ACER Regulation);
 - b. Directive (EU) 2019/944 of the European Parliament and Council of 5 June 2019 on common rules for the internal market for electricity (Electricity Directive);
 - c. Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM Regulation);
 - d. Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation (FCA Regulation);
 - e. Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (ER Regulation);
 - f. Commission Regulation (EU) 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (Transparency Regulation).
- (4) These technical specifications provide the first step towards a pan-European framework for cross-border participation in CMs. This does not mean full harmonisation of CM rules across the Member States, but rather setting up a level playing field between all capacity providers intending to participate in a given CM, regardless of their location. This requires non-discriminatory treatment of foreign and domestic capacity providers. In particular, this means applying equivalent criteria where possible and appropriate. Any difference in treatment between foreign and domestic capacity providers in that respect should be properly justified.
- (5) Achieving this objective relies on progressive adaptation of CM designs and effective cooperation between the relevant actors in implementing these technical specifications, in particular ENTSO-E, transmission system operators (TSOs), capacity mechanisms operators (CM operators) and the regional coordination centres (RCCs).

¹ [2019] OJ L 158/54.

² References to Articles are to be read as references to Articles of this Annex, unless explicitly stated otherwise.

- (6) To this aim, these technical specifications require further agreements between the relevant TSOs and/or CM operators, taking national particularities into account. This also requires coordination between the RCCs in calculating the maximum entry capacity and issuing recommendations in that respect. In order to execute the technical specifications, the TSOs may also collaborate with the distributions system operators (DSOs), as long as such collaboration is permitted under applicable law. A transition period may be foreseen during which only TSOs address the tasks mentioned in these technical specifications.
- (7) Regulatory authorities play a key role in supporting the implementation of these technical specifications in their respective Member States. In particular, they should foster cross-border cooperation between their respective TSOs and/or CM operators, oversee the conclusion of agreements in that matter and ensure that the reasonable, proportionate and efficiently incurred costs related to the implementation of these technical specifications are recovered. Where required, they should also support the Member States in a timely adaptation of the existing CM frameworks to enable effective and non-discriminatory cross-border participation. This includes providing for adequate administrative arrangements for the enforcement of non-availability payments as well as verifying that the maximum entry capacities are calculated in line with Title 2 of these technical specifications, as stated in Article 26(12) and Article 26(13) of the Electricity Regulation. Where considered appropriate by the regulatory authorities or the Member States, this may also include other aspects of the implementation, such as overseeing data compliance in relation to the registry or ensuring appropriate handling of any disputes which may arise from cross-border participation in CMs.
- (8) According to Article 26(2) of the Electricity Regulation, CMs in operation on 4 July 2019 may temporarily allow interconnectors to participate directly in the same competitive process as foreign capacity. While these technical specifications are intended for direct cross-border participation of capacity providers, certain elements of this framework, in particular Titles 2, 3, 4 and 5, may also be used, where appropriate and applicable, to govern the participation of interconnectors. A harmonised approach to cross-border participation (for both direct capacity providers and interconnectors' participation) should be encouraged where appropriate, to support a smooth transition to direct cross-border participation of foreign capacity providers.
- (9) Pursuant to Article 26(4) of the Electricity Regulation, cross-border participation in CMs shall not directly affect cross-zonal schedules and physical flows between Member States. At the same time, the existing EU regulatory framework aims to provide appropriate incentives to interconnectors to be available during system stress. Resource adequacy studies, in particular the European resource adequacy assessment (ERAA), provide relevant information about the contribution of bidding zones to security of supply in other bidding zones. In particular, by estimating the expected availability of interconnection and the likely concurrence of system stress between bidding zones, the ERAA enables the calculation of the maximum entry capacity for cross-border participation in CMs. To ensure consistency and efficiency of future investments, the assessment of future security of supply benefits of additional interconnector capacity should also take interconnector availability and simultaneity of scarcity into account.
- (10) Transparency and monitoring are essential for ensuring accountability of ENTSO-E, the TSOs, the CM operators and the RCCs, as well as increasing stakeholders' understanding of their respective mandates and deliverables. To this aim, the technical specifications impose transparency requirements related to cross-border participation in CMs. These requirements not only aim to ensure a transparent implementation of cross-border participation in CMs, but also promote fully transparent operation of ENTSO-E and the RCCs, as mandated by Article 41(2) of the Electricity Regulation.

(11) These technical specifications have been developed having regard to the objectives of the Electricity Regulation set out in its Article 1 and in line with the main principles of the electricity market operation in Article 3. In that respect, opening CMs to direct cross-border participation of capacity providers is expected to:

- a. allow selecting the cheapest capacity resources to address potential resource adequacy concerns in a cost-efficient way, thereby increasing the overall efficiency and security of supply of the European energy market;
- b. facilitate fair competition between capacity providers, and help deliver appropriate incentives to develop resources where it is most efficient to build;
- c. enable participation of all resources that are capable of providing the required technical performance, in line with a technology-neutral approach;
- d. foster cross-border and regional cooperation by providing a regulatory basis for further bilateral arrangements in the implementation and enforcement of these technical specifications ; and
- e. facilitate trade of CM products across the EU.

TITLE 1 General provisions

Article 1. Structure

1. These technical specifications consist of the following titles corresponding to the deliverables listed in Article 26(11), paragraphs (a) to (f), of the Electricity Regulation:

- | | |
|---------|---|
| Title 2 | sets out the methodology for calculating the maximum entry capacity for cross-border participation, in accordance with paragraph (a). |
| Title 3 | sets out the methodology for sharing the revenues arising through the allocation of entry capacity, in accordance with paragraph (b). |
| Title 4 | sets out the common rules for carrying out availability checks, in accordance with paragraph (c). |
| Title 5 | sets out the common rules for determining when a non-availability payment is due, in accordance with paragraph (d). |
| Title 6 | sets out the terms of operation of the registry of eligible capacity providers, in accordance with paragraph (e). |
| Title 7 | sets out the common rules for identifying foreign capacity eligible to participate in a given CM, in accordance with paragraph (f). |

Article 2. Definitions

1. For the purpose of the technical specifications, the definitions in Article 2 of the Electricity Regulation, Article 2 of the CACM Regulation, Article 2 of the Transparency Regulation and Article 2 of the Electricity Directive shall apply.
2. In addition, the following definitions and acronyms shall apply. In the event of any inconsistency between the following definitions and the definitions pursuant to paragraph (1)³, the latter shall prevail.
 - (a) ‘activation’ means the process in which the CMU contracted in a CM delivers energy or reduces its energy consumption upon request by the TSO or CM operator and/or in particular system conditions during the delivery period.
 - (b) ‘availability’ means the readiness of the CMU contracted in the CM.
 - (c) ‘availability checks’ means actions taken by the TSO in order to establish the availability of a contracted CMU for a given CM.
 - (d) ‘availability commitment’ means the commitment for availability undertaken in a given CM for a given MTU.
 - (e) ‘CCR’ means capacity calculation region pursuant to the Electricity Regulation.

³ References to paragraphs are to be read as references to paragraphs within a given Article of Annex I, unless explicitly stated otherwise.

- (f) 'CM' means capacity mechanism pursuant to the Electricity Regulation.
- (g) 'CM border' means an oriented border from an origin bidding zone to a destination bidding zone, whereby:
 - i. the two bidding zones may or may not have direct network connection;
 - ii. the CM applies in the destination bidding zone; and
 - iii. the origin (respectively destination) bidding zone is BZ_i (respectively BZ_{CM}).
- (h) 'CM contract' means a contract based on which a capacity provider receives remuneration for its availability.
- (i) 'CM operator' is the entity operating the CM (in the Member State(s) applying the CM).
- (j) 'CMU' means a capacity mechanism unit, which is a single unit or a group of aggregated units used by a capacity provider to fulfil its availability commitment.
- (k) 'delivery period' means the period during which the availability commitment applies.
- (l) 'domestic' relates to a Member State, bidding zone or control area applying the CM.
- (m) 'EIC' means 'energy identification code' of the coding scheme developed and managed by ENTSO-E.
- (n) 'eligibility' means compliance with full technical performance as required by the CM in which the capacity provider intends to participate.
- (o) 'eligible capacity provider' means a capacity provider which has at least one eligible CMU. The eligibility of the capacity provider is established with respect to a given CMU for a given CM and does not automatically imply the eligibility of other CMUs within its portfolio.
- (p) 'eligible CMU' means a CMU which fulfils the technical eligibility criteria for cross-border participation in a given CM pursuant to Title 7.
- (q) 'ENS' means 'energy not served' pursuant to the ERAA methodology.
- (r) 'entry capacity' means any kind of cross-zonal access rights, which can be allocated to enable eligible foreign capacity providers to participate in a CM for a given delivery period.
- (s) 'ERAA' means European resource adequacy assessment pursuant to Article 23 of the Electricity Regulation.
- (t) 'ERAA methodology' means the methodology for the ERAA, approved by ACER.
- (u) 'foreign' relates to a Member State, bidding zone or control area where a capacity provider (or a CMU) is located. This Member State, bidding zone or control area is outside the Member State(s) applying the CM, in which the capacity provider intends to participate.
- (v) 'foreign capacity provider' is the capacity provider that offers foreign CMU(s) in the (domestic) CM.
- (w) 'foreign TSO' is the TSO of a Member State, bidding zone or control area outside the Member State(s) applying the CM, where a capacity provider (or a CMU) is located.

- (x) ‘markets considered for availability checks’ means any market considered when assessing the availability of a contracted CMU participating in the market, pursuant to Article 14(1).
- (y) ‘maximum entry capacity’ means the maximum allowed entry capacity on a given CM border for a given delivery period.
- (z) ‘MTU’ means market time unit pursuant to the Transparency Regulation.
- (aa) ‘non-availability volume’ means the difference between the availability commitments for a given delivery period and the amount of capacity available for each CMU (as resulting from availability checks).
- (bb) ‘non-availability payment’ refers to any penalty that is charged to the capacity provider for each CMU due to non-availability volume.
- (cc) ‘NRAAs’ means national resource adequacy assessments pursuant to Article 24 of the Electricity Regulation.
- (dd) ‘RCC’ means regional coordination centre pursuant to the Electricity Regulation.
- (ee) ‘reference period’ means the period during which the availability checks are carried out, pursuant to Article 14(3).
- (ff) ‘registry’ means a digital platform set up for the purpose of registering capacity providers as eligible, pursuant to Article 26(10)(a) of the Electricity Regulation.
- (gg) ‘registry user’ means an entity having access to the registry, pursuant to Article 21(2) and (3).
- (hh) ‘system stress’ refers to a time of system stress in line with Article 22(1) of the Electricity Regulation. System stress may refer to either
 - i. a forecast of system stress events for a target year when calculating the maximum entry capacity; or
 - ii. a system stress event formally notified by the CM operator within the operation of a given CM.
- (ii) ‘target year’ means a future year (or another time window) for which a CM auction open to cross-border participation is expected to take place (for a given CM).
- (jj) ‘total available capacity resource margin’ is calculated pursuant to Article 9 and means, for a given bidding zone *BZ* and MTU, the capacity resources available to provide additional resource adequacy services (with or without cross-zonal exchanges).
- (kk) ‘TSO’ means transmission system operator pursuant to the Electricity Directive.

3. In these technical specifications, unless the context clearly indicates otherwise:

- (a) the singular also includes the plural and vice versa;
- (b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of the technical specifications; and
- (c) any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it then in force.

Article 3. Scope

1. Pursuant to Article 26 of the Electricity Regulation, these technical specifications shall at least apply to CMs which are open to direct cross-border participation of foreign capacity providers capable of providing equivalent technical performance to domestic capacity providers. Where deemed appropriate by the relevant regulatory authorities, these technical specifications, or parts thereof, shall also apply to CMs, which are only open to direct cross-border participation of foreign capacity providers without equivalent technical performance.
2. Application of Title 3 to reliability options may be subject to further conditions, as agreed by both relevant regulatory authorities, in order to ensure the provision of appropriate incentives for the involved stakeholders.

Article 4. Implementation

1. These technical specifications shall be implemented once direct cross-border participation of foreign capacity providers in CMs is enabled by the regulatory frameworks of the relevant Member States, subject to paragraphs (2) and (3).
2. Title 2 shall be implemented once the relevant RCCs are established and the ERAA results are available.
3. The registry shall be in operation by 5 July 2021 in line with Article 26(15) of the Electricity Regulation.
4. ENTSO-E shall review the relevant Titles of these technical specifications two years after their first application and shall report to ACER any possible amendments. This review is without prejudice to Article 27(4) of the Electricity Regulation.
5. ENTSO-E shall assess whether the implementation of these technical specifications may lead to cybersecurity risks. If it is the case, ENTSO-E shall report on any such risks and the proposed mitigation measures to ACER in a timely manner.
6. ENTSO-E and RCCs shall provide ACER with data enabling ACER's monitoring tasks.

TITLE 2 Methodology for calculating the maximum entry capacity

Article 5. General rules

1. Pursuant to Article 26(7) of the Electricity Regulation, RCCs shall calculate the maximum entry capacity available for the participation of foreign capacity providers in a given CM and issue a recommendation to the TSOs. The calculation shall be done annually for each CM border, taking into account the expected availability of interconnection and the likely concurrence of system stress in the system where the CM is applied and the system in which the foreign CMUs are located.
2. The calculation of the maximum entry capacity shall be consistent with the ERAA methodology. Pursuant to the ERAA methodology, ENTSO-E shall provide the relevant RCCs with all the ERAA data required for the calculation of the maximum entry capacity in a timely manner.

Article 6. Calculation of the maximum entry capacity

1. For a given CM and target year, the RCC shall calculate the maximum entry capacity as follows.
2. The TSO(s) of the Member State(s) applying the CM shall provide the RCC with a list of all foreign bidding zone(s), or parts thereof, located in those Member States which are allowed to participate in its CM in a given target year, in line with the CM rules and, where applicable, subject to Member State(s)' decision pursuant to Article 26(2) of the Electricity Regulation. This list shall at least include all bidding zone(s), or parts thereof, located in the Member State(s), which have a direct connection with the Member State(s) applying the CM.
3. The RCC shall define considered CM borders as all the pairs of
 - (a) bidding zone(s) from the list pursuant to paragraph (2); and
 - (b) bidding zone(s), or parts thereof, located in the Member State(s) applying the CM (i.e. BZ_{CM}).
4. For the purpose of calculating maximum entry capacity, the RCC shall use:
 - (a) the latest available ERAA study based on the central reference scenario with CMs, if it fulfils the reliability standard of BZ_{CM} ; or
 - (b) another recent resource adequacy study. In this case, the study shall
 - i. rely on a methodology and assumptions which are consistent with the ERAA; and
 - ii. align the forecast level of resource adequacy with the reliability standard for BZ_{CM} and the considered target year. The RCC or the relevant TSOs may exceptionally calibrate this other study to align the forecast level of resource adequacy with the reliability standard in every Member State with CM, by adding or removing fully available⁴ generation capacity for the given target year.

The RCC shall rely on a single resource adequacy study to calculate maximum entry capacities over all considered CM borders.

⁴ With 100% availability (i.e. no outage).

5. The RCC shall define system stress MTUs for the bidding zone in which the CM applies (BZ_{CM}), based on all the Monte Carlo sample years (describing the given target year) from the study pursuant to paragraph (4). System stress MTUs shall at least include the MTUs of the CM delivery period for which ENS is positive in BZ_{CM} . System stress MTUs may include additional MTUs, if properly justified by the RCC. The system stress MTUs shall be the same for all considered CM borders which have the same destination bidding zone.
6. For each considered CM border, the RCC shall calculate the maximum entry capacity as follows:
 - (a) Define a harmonised⁵ approach to calculate contributions to maximum entry capacity.
 - i. The contributions to maximum entry capacity shall be calculated pursuant to Article 7 (net positions); or
 - ii. if the calculation of maximum entry capacity only considers bidding zones with direct connection with BZ_{CM} , the contribution to maximum entry capacity may be calculated pursuant to Article 8 (cross-zonal exchanges).
 - (b) For each system stress MTU defined pursuant to paragraph (5), compute the contribution to maximum entry capacity using the harmonised approach referred to in paragraph (a).
 - (c) Calculate the maximum entry capacity as the average of the contributions to maximum entry capacity over all system stress MTUs. If the maximum entry capacity is negative, set it to zero.
 - (d) Calculate the total available capacity resource margin (with and without cross-zonal exchanges) for each origin bidding zone of a considered CM border and for at least all system stress MTUs, in line with Article 9.
 - (e) The RCC may adjust the maximum entry capacity in case the following cumulative conditions are met:
 - i. the origin bidding zone of the CM border (BZ_i) spans multiple Member States;
 - ii. part(s) of BZ_i are not allowed to participate in the CM of BZ_{CM} ; and
 - iii. the parts of BZ_i , which are not allowed to participate in the CM of BZ_{CM} , are expected to account for a significant share of the maximum entry capacity.

This adjustment should aim to more accurately reflect the actual contribution from those part(s) of BZ_i which are allowed to participate in the CM of BZ_{CM} .
7. The RCC recommendation to TSOs pursuant to Article 26(7) of the Electricity Regulation shall be made for each considered CM border and shall at least include the following information:
 - (a) main assumptions underlying the calculation of the maximum entry capacity;
 - (b) calculated maximum entry capacity;
 - (c) distribution of contributions to maximum entry capacity over all defined system stress MTUs;

⁵ The same approach shall apply for calculating contributions to maximum entry capacity on all CM borders and system stress MTUs.

- (d) average total available capacity resource margin in BZ_i over all defined system stress MTUs, with and without cross-zonal exchanges;
 - (e) distribution of total available capacity resource margin in BZ_i over all defined system stress MTUs, with and without cross-zonal exchanges; and
 - (f) where appropriate, and only if the average total available capacity resource margin (pursuant to paragraph (d)) is significantly below the calculated maximum entry capacity, a proposal on how to reflect the total available capacity resource margin in the calculated maximum entry capacity.
8. In line with section 15.3 of Annex I to the Electricity Regulation, the RCC shall provide a calculation for each CM border where
- (a) the destination bidding zone, or parts thereof, is located in the Member State applying the CM; and
 - (b) the origin bidding zone belongs to the same system operation region⁶ as the destination bidding zone from paragraph (a).
9. For those CM borders which do not constitute ‘considered CM borders’ pursuant to paragraph (3), the RCC may calculate the entry capacity as follows

$$MEC_{CM\ border}(target\ year) = 0$$

Where

- $MEC_{CM\ border}(target\ year)$ is the maximum entry capacity of the given CM border and target year.

Article 7. Contribution to maximum entry capacity based on net positions

1. For each defined system stress MTU, the RCC shall calculate the contribution to maximum entry capacity on a CM border from BZ_i to BZ_{CM} as follows:
- (a) Calculate the global net position of each bidding zone BZ , which is origin or destination of any considered CM border, as

$$\begin{aligned} [NP_{BZ,global}]_{MTU} &= [injections_{BZ}]_{MTU} - [withdrawals_{BZ}]_{MTU} \\ &\quad - \sum_{BZ_j\ excluded} [Commercial\ exchange_{BZ \rightarrow BZ_j}]_{MTU} \end{aligned}$$

Where

- $[NP_{BZ,global}]_{MTU}$ is the global net position of BZ for the considered system stress MTU;
- $[injections_{BZ}]_{MTU}$ is the sum of all electricity injections from capacity resources into BZ ;
- $[withdrawals_{BZ}]_{MTU}$ is the sum of all electricity withdrawals of capacity resources from BZ ;

⁶ Defined pursuant to Article 36 of the Electricity Regulation.

- $[Commercial\ exchange_{BZ \rightarrow BZ_j}]_{MTU}$ is the commercial cross-zonal exchange from BZ to BZ_j , which is excluded from the calculation pursuant to paragraph (2) and which has a bidding zone border with BZ . A positive value means that BZ is exporting, whereas a negative value means that BZ is importing; and
- $\sum_{BZ_j\ excluded} [Commercial\ exchange_{BZ \rightarrow BZ_j}]_{MTU}$ is the sum of commercial exchanges on all bidding zone borders between BZ and bidding zones excluded from the calculation.

(b) In case BZ_{CM} globally exports⁷,

i. If BZ_i globally imports, the (negative) contribution shall be equal to:

$$[BZ_i \rightarrow BZ_{CM}]_{MTU} = - [Net\ position_{BZ_{CM}} * \frac{Net\ position_i}{\sum_k Net\ position_k}]_{MTU}$$

Where:

- $[BZ_i \rightarrow BZ_{CM}]_{MTU}$ is the contribution from BZ_i to BZ_{CM} for the considered system stress MTU;
- $Net\ position_{BZ_{CM}}$ is the (positive⁸) global net position of BZ_{CM} for the considered system stress MTU;
- $Net\ position_i$ is the (negative) global net position of BZ_i for the considered system stress MTU;
- $Net\ position_k$ is the (negative) global net position of any globally importing bidding zone for the considered system stress MTU;
- $\sum_k Net\ position_k$ is the sum of global net positions of globally importing bidding zones for the considered system stress MTU.

ii. If BZ_i globally exports (or has a global net position equal to zero), the contribution shall be zero.

(c) In case BZ_{CM} globally imports,

i. If BZ_i globally imports (or has a global net position equal to zero), the contribution shall be zero.

ii. If BZ_i globally exports, the (positive) contribution shall be equal to:

$$[BZ_i \rightarrow BZ_{CM}]_{MTU} = - [Net\ position_{BZ_{CM}} * \frac{Net\ position_i}{\sum_k Net\ position_k}]_{MTU}$$

Where:

⁷ Global export (respectively import) means that the global net position is positive (respectively negative).

⁸ Because BZ_{CM} is exporting.

- $[BZ_i \rightarrow BZ_{CM}]_{MTU}$ is the contribution from BZ_i to BZ_{CM} for the considered system stress MTU;
- $Net\ position_{BZ_{CM}}$ is the (negative⁹) global net position of BZ_{CM} for the considered system stress MTU;
- $Net\ position_i$ is the (positive) global net position of BZ_i for the considered system stress MTU;
- $Net\ position_k$ is the (positive) global net position of any globally exporting bidding zone for the considered system stress MTU;
- $\sum_k Net\ position_k$ is the sum of global net positions of globally exporting bidding zones for the considered system stress MTU.

(d) In case the global net position of BZ_{CM} is equal to zero, the contribution from BZ_i shall be zero.

2. Each foreign bidding zone, which is not part of any considered CM border, shall be excluded from the calculation of the contribution to maximum entry capacity. In this case, the global net position of the excluded bidding zone shall be set to zero in the formulas set out in paragraph (1)(b) and (c).

Article 8. Contribution to maximum entry capacity based on commercial cross-zonal exchanges

1. For each defined system stress MTU, the contribution to maximum entry capacity on a CM border from BZ_i to BZ_{CM} shall be equal to

$$[BZ_i \rightarrow BZ_{CM}]_{MTU} = [Commercial\ exchange_{BZ_i \rightarrow BZ_{CM}}]_{MTU}$$

Where

- $[BZ_i \rightarrow BZ_{CM}]_{MTU}$ is the contribution of BZ_i to BZ_{CM} for the considered system stress MTU and CM border;
- $[Commercial\ exchange_{BZ_i \rightarrow BZ_{CM}}]_{MTU}$ is the commercial cross-zonal exchange on the bidding zone border from BZ_i to BZ_{CM} . A positive value means that BZ_{CM} is importing, whereas a negative value means that BZ_{CM} is exporting.

Article 9. Total available capacity resource margin

1. For a given bidding zone and MTU, the total available capacity resource margin should aim to reflect the effective ability of the given bidding zone to contribute to resource adequacy.
2. The total available capacity resource margin shall be computed both with and without cross-zonal exchanges.
3. The total available capacity resource margin without cross-zonal exchange shall be equal to

⁹ Because BZ_{CM} is importing.

$$\begin{aligned}
 & [capacity\ resource\ margin_{BZ}]_{MTU, no\ XZ} \\
 & = \sum_{r \in BZ} [available\ capacity_r]_{MTU} - [demand_{BZ}]_{MTU}
 \end{aligned}$$

Where

- $[capacity\ resource\ margin_{BZ}]_{MTU, no\ XZ}$ is the total available capacity resource margin (without cross-zonal exchanges) of BZ for the considered MTU;
- $[available\ capacity_r]_{MTU}$ is the available capacity of a given capacity resource r for the considered MTU, in the resource adequacy study pursuant to Article 6(4);
- $\sum_{r \in BZ} [available\ capacity_r]_{MTU}$ is the sum of all available capacities over all capacity resources of BZ ; and
- $[demand_{BZ}]_{MTU}$ is the demand (before activation of demand response) of BZ for the considered MTU.

4. The total capacity resource margin with cross-zonal exchanges shall be equal to

$$\begin{aligned}
 & [capacity\ resource\ margin_{BZ}]_{MTU, XZ} \\
 & = [capacity\ resource\ margin_{BZ}]_{MTU, no\ XZ} + [import_{BZ}]_{MTU}
 \end{aligned}$$

Where

- $[capacity\ resource\ margin_{BZ}]_{MTU, XZ}$ is the total available capacity resource margin (with cross-zonal exchanges) of BZ for the considered MTU;
- $[capacity\ resource\ margin_{BZ}]_{MTU, no\ XZ}$ is the total available capacity resource margin (without cross-zonal exchanges) of BZ for the considered MTU; and
- $[import_{BZ}]_{MTU}$ is the total cross-zonal import of BZ for the considered MTU, in the resource adequacy study pursuant to Article 6(4). The RCC may adjust the import value to avoid double counting¹⁰.

Article 10. Transparency requirements

1. The calculation of the maximum entry capacity shall be fully transparent in order to facilitate stakeholders' understanding regarding the inputs, data, assumptions and the results.
2. To this aim, for each calculation of maximum entry capacity, the RCC shall publish on its website at least the following:
 - (a) input data:
 - i. an overview of the study pursuant to Article 6(4), including at least the underlying high-level assumptions;

¹⁰ For example, when estimating the total available capacity resource margin for two bidding zones B and C which are allowed to participate in a CM in bidding zone A, exports from B to C should be reflected in capacity resource margin in either B or C, but not in both simultaneously.

- ii. if applicable, calibration conducted in line with Article 6.4(b) and its underlying assumptions; and
- iii. approach used to estimate the contributions to maximum entry capacity;

(b) output data:

- i. Member State of the CM;
- ii. EICs of BZ_{CM} and BZ_i ;
- iii. target year;
- iv. calculated maximum entry capacity; and
- v. for each considered CM border in line with Article 6(3)
 - b.v.1. distribution of contributions to maximum entry capacity over all system stress MTUs of BZ_{CM} ;
 - b.v.2. average total available capacity resource margin in BZ_i over all system stress MTUs of BZ_{CM} ;
 - b.v.3. distribution of total available capacity resource margin in BZ_i over all system stress MTUs of BZ_{CM} ;
 - b.v.4. the adjustment of the maximum entry capacity pursuant to Article 6(6)(e), if any; and
 - b.v.5. the suggestion to reflect the total available capacity margin pursuant to Article 6.7(f), if any.

TITLE 3 - Methodology for sharing the revenues arising from the allocation of entry capacity

Article 11. Revenue-sharing

1. Pursuant to Article 26(9) of the Electricity Regulation, where CMs allow for cross-border participation in two neighbouring Member States, any revenues arising through the allocation of entry capacity on this CM border shall accrue to the TSOs concerned and shall be shared between them in accordance with either
 - (a) this Title 3; or
 - (b) a common methodology approved by both relevant regulatory authorities.
2. These revenues shall be shared in accordance with the sharing key for congestion income developed in accordance with the congestion income distribution methodology pursuant to Article 57 of the FCA Regulation.

TITLE 4 - Common rules for carrying out availability checks

Article 12. General rules

1. Pursuant to Article 26(10)(b) of the Electricity Regulation, the foreign TSO shall carry out availability checks of the foreign CMUs located within its control area and participating cross-border in a given CM.
2. The foreign TSO shall conduct the availability checks for a given CM based, as much as possible, on the availability check rules of this CM.
3. For a given CM, the rules on availability checks of foreign CMUs shall be transparent and shall ensure non-discriminatory treatment of foreign and domestic capacity providers. The foreign TSO shall carry out availability checks of the foreign CMUs as equivalently as possible to the domestic CMUs participating in a given CM, in particular regarding:
 - (a) reference period;
 - (b) frequency of availability checks;
 - (c) minimum frequency of availability checks; and
 - (d) availability check rules specific to the CM, referred to in paragraph (2).
4. Availability checks shall prevent undue discrimination among foreign CMUs.
5. The foreign TSO shall ensure that availability checks do not negatively affect system security. The foreign TSO should also endeavour
 - (a) to ensure that availability checks do not increase the costs for maintaining the same level of system security; and
 - (b) to minimise the impact of availability checks on the markets considered for availability checks (defined in Article 14(1)).

Article 13. Cooperation between CM operators and foreign TSOs

1. The CM operator and the foreign TSO shall closely collaborate to fulfil the requirements of Title 4.
2. In order to enable effective cross-border participation, the CM operator shall facilitate availability checks carried out by the foreign TSO. In particular, the CM operator shall provide the foreign TSO with sufficient information pertaining to its CM, including at least:
 - (a) delivery and reference period;
 - (b) availability check rules, referred to in Article 12(2);
 - (c) availability commitment per CMU and per MTU; and
 - (d) data exchange process (including data format);
3. The foreign TSO shall communicate the results of the availability checks to the CM operator in a timely manner. In particular, the foreign TSO shall provide, for each MTU and CMU, the information on the total available capacity resulting from availability checks.

Article 14. Scope of availability checks

1. The markets considered for availability checks shall at least include the wholesale day-ahead and balancing markets. The foreign TSO should endeavour to also include the wholesale intraday markets in the markets considered for availability checks.
2. During the suspension of market activities according to Article 35 of the ER Regulation, availability checks shall not apply, to the extent that the suspension of market activities affects the calculation of availability.
3. The foreign TSO should endeavour to conduct availability checks during the delivery period. The foreign TSOs may however conduct availability checks outside of the delivery period if this also applies to domestic CMUs participating in a given CM, where possible.

Article 15. Application of availability checks

1. For any CMU contracted in a CM, the probability of being subject to availability checks shall be non-zero during the reference period.
2. The availability of a foreign CMU shall be checked according to one or a combination of the following subparagraphs:
 - (a) for some CMUs participating in the markets considered for availability checks referred to in Article 14(1), the availability in any of these markets. In particular, a CMU shall be deemed available if it is technically available and, due to system operation requirements (including at least congestion management) which are beyond the CMU's control:
 - i. it has commitments in any of these markets, but is unable to deliver energy; or
 - ii. it is temporarily unable to participate in any of these markets;
 - (b) for some dispatchable CMUs, the availability to deliver energy upon activation;
 - (c) specific availability check rules, for CMUs for which it is not appropriate to check availability in line with paragraphs (a) and (b). These specific rules should as much as possible be equivalent for domestic and foreign capacity providers.
3. Where possible, monitoring of CMUs' availability in the market (e.g. energy delivered, bids submitted to any market considered for availability checks, and outage information) should be the preferred approach.

Article 16. Transparency requirements

After every delivery period, or at least once per year, the foreign TSO and the CM operator shall provide their respective regulatory authorities with aggregated data on the total available capacity resulting from availability checks of contracted foreign CMUs during the delivery period. This data shall also be made available to the regulatory authorities upon request.

TITLE 5 - Common rules for determining when a non-availability payment is due

Article 17. General rules

1. Pursuant to Article 26(6) of the Electricity Regulation, capacity providers shall be required to make non-availability payments where their capacity is not available.
2. For a given CM, the rules on non-availability payments applicable to foreign capacity providers shall be transparent and shall ensure non-discriminatory treatment of foreign and domestic capacity providers. In particular, foreign and domestic capacity providers shall be subject, as much as possible, to equivalent rules regarding:
 - (a) settlement timeframe;
 - (b) calculation of non-availability payment (including e.g. alternative penalties, exemptions or force majeure clauses, stop loss limits, escalation of penalties); and
 - (c) CM contract termination fees.

Article 18. Application of non-availability payments

1. Pursuant to Article 22(1)(i) of the Electricity Regulation, appropriate penalties shall apply to capacity providers that are not available in times of system stress. The non-availability payment rules shall aim at incentivising capacity providers to be available during the delivery period.
2. For a given CM, foreign capacity providers shall not be subject to non-availability payments for non-availability volumes outside the delivery period.
3. Pursuant to Article 26(5) of the Electricity Regulation, capacity providers shall be able to participate in more than one CM. Pursuant to Article 26(6) of the Electricity Regulation, where capacity providers participate in more than one CM for the same delivery period, they shall make multiple non-availability payments where they are unable to fulfil multiple commitments.

Article 19. Definition of non-availability volume in case of multiple commitments

1. Due to differences in CM rules, availability checks carried out upon the same CMU may differ and may result in a different total available capacity for each CM in which the CMU is contracted.
2. For a given CM and MTU, the availability volume attributed to each CMU shall be defined as

$$\begin{aligned} \text{avail. volume}_{CM}(MTU) \\ = \text{total avail. capacity}_{CM}(MTU) * \frac{\text{avail. commitment}_{CM}(MTU)}{\sum_{i \in CMs} \text{avail. commitment}_i(MTU)} \end{aligned}$$

Where

- *avail. volume*_{CM}(MTU) is the availability volume of the CMU in a given CM;
- *total avail. capacity*_{CM}(MTU) is the total available capacity of the CMU as a result of availability checks in the given CM;

- $avail.commitment_{CM}(MTU)$ is the availability commitment of the CMU in the given CM;
 - $\sum_{i \in CMs} avail.commitment_i(MTU)$ is the total availability commitment of the CMU in all CMs which the CMU is contracted in.
3. For a given CM and for each MTU, the non-availability volume attributed to each CMU shall constitute the difference between the availability commitment and the availability volume for that CM, i.e.:

$$non - avail. volume_{CM}(MTU) = avail. commitment_{CM}(MTU) - avail. volume_{CM}(MTU)$$

Where

- $non - avail. volume_{CM}(MTU)$ is the non-availability volume of the CMU in the given CM for each MTU
 - $avail. commitment_{CM}(MTU)$ is the availability commitment of the CMU in the given CM for each MTU
 - $avail. volume_{CM}(MTU)$ is the availability volume in the given CM for each MTU, in line with paragraph (2);
4. For the purpose of definition and computation of non-availability volumes in line with paragraphs (2) and (3), the availability commitment for each considered CM shall be zero outside the delivery period of the considered CM.
5. For each CM, the way non-availability volumes are taken into account or aggregated (including time period) shall, as much as possible, be equivalent for domestic and foreign CMU

Article 20. Transparency requirements

After every delivery period or at least once a year, the foreign TSO and the CM operator shall provide their respective regulatory authorities with aggregated data on non-availability volumes and non-availability payments of foreign capacity providers during the delivery period. This data shall also be made available to the regulatory authorities upon request.

TITLE 6 - Terms of operation of the registry

Article 21. General rules

1. Pursuant to Article 26(15) of the Electricity Regulation, ENTSO-E shall set up and operate the registry of capacity providers eligible for cross-border participation in CMs.
2. The registry users shall at least include
 - (a) eligible capacity providers;
 - (b) TSOs responsible for the eligibility checks pursuant to Article 27; and
 - (c) CM operators and their TSOs.
3. To ensure effective and non-discriminatory cross-border participation in CMs in line with Article 26(13) of the Electricity Regulation, the relevant regulatory authorities may designate other registry users. To this aim, the relevant regulatory authorities shall request ENTSO-E to provide the designated party with access to the registry.
4. The TSOs may submit data and edit the data they submitted. The CM operators may submit data and edit the data they submitted. All registry users may view the information in the registry, subject to confidentiality requirements while ensuring effective cross-border participation in CMs.
5. All registry users shall have free and continuous access to the registry.
6. ENTSO-E shall provide a single point of contact for registry users for matters related to the registry.
7. The registry shall at least be accessible in the English language.
8. ENTSO-E shall ensure state-of-the-art operating and personal data security. ENTSO-E should endeavour to ensure user-friendly data access and data submission to the registry.

Article 22. Scope of data

1. The registry shall at least include the following data related to each eligible capacity provider:
 - (a) corporate credentials;
 - (b) allocation of entry capacity per CM border;
 - (c) result from secondary trading of entry capacity per CM border¹¹ pursuant to Article 26(14) of the Electricity Regulation;
 - (d) aggregated availability commitments per CM; and
 - (e) aggregated result from secondary trading of availability commitments per CM¹².
2. The registry shall at least include the following data related to each eligible CMU:

¹¹ Set to zero in the absence of secondary trading.

¹² See footnote 11.

- (a) data submitted to the foreign TSO pursuant to Article 28(1); and
 - (b) eligibility for each CM in which the capacity provider intends to participate.
3. The registry shall at least include the following information per CM:
 - (a) delivery period;
 - (b) all technical requirements for cross-border participation; and
 - (c) where applicable, announcements related to the occurrence of system stress events.
 4. The registry may include additional data related to capacity providers, CMUs or CMs.

Article 23. Data provision

1. The foreign capacity providers shall provide the foreign TSO with the data for the eligibility check pursuant to Article 28(1);
2. The eligible foreign capacity providers shall provide the CM operator with the data listed in Article 22(1);
3. Where applicable, the eligible foreign capacity providers contracted in a given CM shall provide the CM operator with:
 - (a) result from secondary trading of entry capacity per CM border pursuant to Article 26(14) of the Electricity Regulation; and
 - (b) result from secondary trading of availability commitments per CM pursuant to Article 22(3)(c) of the Electricity Regulation.

Article 24. Data submission to the registry

1. The relevant entities shall submit data to the registry as follows:
 - (a) The CM operator shall submit at least the following data related to participation in its CM, including:
 - i. a list of all technical requirements for cross-border participation in its CM;
 - ii. delivery period for each target year;
 - iii. where available, announcements related to the occurrence of system stress events.
 - (b) The foreign TSO shall submit the data obtained from the foreign capacity provider pursuant to Article 28(1) together with the (positive or negative) results of the performed eligibility checks pursuant to Article 27.
 - (c) The CM operator shall submit the data related to the participation of a given eligible capacity provider in its CM, including at least data listed in Article 22(1).
2. Capacity providers shall be responsible for accuracy of the data they provided pursuant to Article 23. The foreign TSO and the CM operator shall be individually responsible for any discrepancy between the data provided by the foreign capacity provider and the data they individually submitted

to the registry. Any registry user may request the entity which submitted data to the registry to rectify errors in the data which this entity submitted.

3. Capacity providers shall inform the foreign TSO or the CM operator (according to their responsibilities pursuant to paragraph (1)) about any updates to the provided data. In this case, the foreign TSO or the CM operator shall submit the updated data to the registry in a timely manner. Paragraphs (1) and (2) apply mutatis mutandis to data updates.

Article 25. Transparency requirements

1. Every year, based on registry data, ENTSO-E shall prepare and publish a report containing aggregated and, where required, anonymised data including at least
 - a. eligible foreign installed capacity¹³ per CM, Member State(s) and target year; and
 - b. an overview of the relevant CM rules referred to in Article 22(3).
2. Every year, based on registry data, each TSO shall prepare a report containing detailed data on the capacity providers located within its control area, i.e.
 - a. eligible CMUs;
 - b. cross-border participation in the CMs of various Member States; and
 - c. delivery periods related to cross-border participation.

The individual TSO shall provide this report to the regulatory authority of that TSO. The TSOs of one Member State may provide a joint report to the regulatory authority of that Member State. ENTSO-E shall coordinate the data preparation to ensure consistent data format and data definition, and shall provide a joint report to ACER.

3. In addition, ENTSO-E shall provide the regulatory authority of the Member State applying the CM with access, upon request, to data on foreign capacity providers participating in that CM.

¹³ Of all technologies, including demand response and storage.

TITLE 7 - Common rules for identifying foreign capacity eligible to participate in a capacity mechanism

Article 26. General rules

1. Foreign capacity providers shall have their eligible CMU(s) registered for a given CM in the registry. Eligibility of a CMU for a given CM means that it meets all technical requirements for participating in that CM, based on the list provided by its CM operator pursuant to Article 24(1)(a)(i). These technical requirements shall be equivalent, as far as possible, for domestic and foreign capacity providers participating in a given CM.
2. In addition to eligibility in the registry, each CM operator may request additional requirements from foreign capacity providers. These additional requirements shall not refer to technical performance¹⁴, shall be non-discriminatory and proportionate, and shall be equivalent, as far as possible, for domestic and foreign capacity providers.
3. If the foreign TSO is unable to assess the technical performance (related to eligibility) and/or availability of a given individual unit within an aggregated CMU, the following restrictions to simultaneous participation in CMs shall apply:
 - (a) if a given individual unit is part of an aggregated CMU assigned with an availability commitment for a given delivery period, that individual CMU shall not form part of a different (individual or aggregated) CMU for the overlapping delivery period (for any CM), and shall not take additional availability commitments individually for the same delivery period (for any CM);
 - (b) if a given individual unit has an availability commitment for a given delivery period, this CMU shall not form part of any aggregated CMU which has availability commitments for the overlapping delivery period (in any CM).

Article 27. Eligibility check

1. In order to establish whether a foreign CMU is eligible to participate in a given CM, the foreign TSO shall carry out an eligibility check and, where appropriate, may consult the CM operator. This eligibility check shall be carried out as follows.
2. The foreign capacity provider shall submit to the foreign TSO a request for an eligibility check of its CMU(s). The foreign TSO shall define the scope and format of the request, along with the timeline of the eligibility check, in close collaboration with the CM operator. The request shall at least include the data enabling the eligibility check pursuant to Article 28.
3. The foreign TSO shall verify the data submitted by the foreign capacity provider and establish the eligibility of its CMU(s) for a given CM.
4. Following a positive eligibility check, the foreign TSO shall register eligible CMUs in the registry, and inform the foreign capacity provider and the relevant CM operator accordingly. The foreign TSO may send these notifications via the registry.

¹⁴ Relating, for instance, to financial standing or non-subsidisation.

5. The foreign TSO shall inform the foreign capacity provider about a negative eligibility check, providing reasons for the negative result.
6. The data of the eligible foreign CMUs shall be subject to regular verification by the foreign TSO, according to applicable CM rules. The verification frequency shall be equivalent as much as possible for foreign and domestic capacity providers. The verification may lead to updating the CMU data in the registry, affecting its eligibility for a given CM. In this case, the foreign TSO shall then update the eligibility of the CMU in line with the relevant CM rules.
7. The foreign TSO shall notify the foreign capacity provider about any updates in the eligibility of its CMU(s). The relevant CM operator(s) shall be notified accordingly. The foreign TSO may send these notifications via the registry.
8. The foreign TSO shall perform its tasks pursuant to paragraphs (3) to (7) in a timely manner and without unjustified delay.

Article 28. Data for the eligibility check

1. In its request for eligibility check, the foreign capacity provider shall submit up-to-date data of its CMU in accordance with the list of all technical requirements for participation in a given CM, provided by the relevant CM operator pursuant to Article 24(1)(a). The submitted data may inter alia include:
 - (a) geographic location;
 - (b) generation, demand response and/or storage capacity;
 - (c) technology and fuel type;
 - (d) metering points;
 - (e) network operator;
 - (f) emission factors of CO₂ per amount of electricity generated, pursuant to Article 22(4) of the Electricity Regulation; and
 - (g) EIC.
2. For a given aggregated CMU, the data referred to in paragraph (1) may be submitted for each individual CMU forming part of the aggregated CMU.
3. For CMUs which are not yet operational, the capacity provider should endeavour to provide its best forecast on data pursuant to paragraph (1), where such data items are uncertain.