
Determination of capacity calculation regions

All TSOs' proposal for amendment of the Determination of capacity calculation regions methodology in accordance with Article 15(1) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management

For submission to ACER

[30/11/202320/07/2022](#)

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Whereas

- (1) This document sets out the determination of capacity calculation regions (hereafter referred to as “CCRs”) in accordance with Article 15(1) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (hereafter referred to as the “Determination of CCRs”).
- (2) On 17 November 2015, all Transmission System Operators (hereafter referred to as “all TSOs”) submitted the “All TSOs’ proposal for Capacity Calculation Regions in accordance with Article 15(1) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management” (hereafter referred to as the “CACM Regulation”), together with an explanatory note to all regulatory authorities.
- (3) On 17 November 2016 the Agency for the Cooperation of Energy Regulators (hereafter referred to as “ACER”) issued its Decision 06/2016 on the “Electricity Transmission System Operators’ Proposal for the Determination of Capacity Calculation Regions” which adopted the Determination of CCRs.
- (4) On 30 June 2017, in accordance with Article 9(13) of the CACM Regulation, all TSOs submitted to all regulatory authorities the first proposal for amendment of the Determination of CCRs. On 18 September 2017, all regulatory authorities approved the first proposal for amendment of the Determination of CCRs.
- (5) On 23 May 2018, all TSOs submitted to all regulatory authorities the second proposal for amendment of the Determination of CCRs. All regulatory authorities did not reach an agreement to approve the proposal and requested ACER to adopt a decision on the proposal, pursuant to Article 9(11) of the CACM Regulation. On 1 April 2019 ACER issued its Decision 04/2019 on the “Electricity Transmission System Operators’ Proposal for the Determination of Capacity Calculation”.
- (6) By its judgments of 24 October 2019 in the cases T-332/17 and T-333/17, the General Court annulled ACER Board of Appeal’s (hereafter referred to as “ACER BoA”) Decision A-001-2017 (consolidated) of 17 March 2017 dismissing the appeal against ACER Decision 06/2016. The ACER BoA has relaunched the procedure to review ACER Decision 06/2016 and issued a new decision on 22 May 2020. With the latter, ACER BoA remitted the case to the Director of ACER and specified that *“the competent party or parties – based on the rules of competence provided for by regulations currently in force – should review the Contested Decision, i.e. ACER Decision 06/2016, and amend it, replace it or confirm it, as they see relevant, and based on current circumstances. Hence the Agency should refer the decision to such party or parties. The Contested Decision will remain in force until such amendment, replacement or confirmation, if any”*.

- (7) On 5 June 2020, ACER's Director sent a letter to all TSOs inviting them to prepare an updated proposal for the Determination of CCRs and submit it to ACER for approval in the shortest time possible; drawing TSOs' attention on:
 - (i) The changes since the initial all TSOs' proposal for the Determination of CCRs of 29 October 2015. In particular, there have been two amendments to the Determination of CCRs adopted since then, and,
 - (ii) Article 5(2) of 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 (hereafter referred to as the "Regulation (EU) 2019/942") introduced a new procedure for the approval of proposals for common terms and conditions or methodologies where an all TSOs' proposal is now to be submitted directly to ACER.
- (8) On 5 June 2020, ACER's Board of Regulators sent a letter to the TSOs expressing full support and endorsement on the views and process set out by the ACER Director in his letter of 5 June.
- (9) On 9 November 2020 all TSOs submitted to ACER the third proposal for amendment of the Determination of CCRs. On 7 May 2021 ACER issued its Decision 04/2021 on the "Electricity Transmission System Operators' Proposal for the Determination of Capacity Calculation".
- (10) Following the approval of the CACM Regulation by the Norwegian Parliament in June 2021, the CACM Regulation is made part of the Agreement on the European Economic Area (EEA) and the CACM Regulation is made binding in the internal legal order in Norway with entry into force 1 August 2021. Consequentially, this amended methodology allocates the Norwegian bidding zone borders to the relevant CCRs, namely CCR Nordic and CCR Hansa.
- (11) While there is currently no operational interconnector between the Single Electricity Market (SEM) of Ireland and Northern Ireland, and a European Union bidding zone, the proposed Celtic interconnector between Ireland and France is due to be completed in 2026. ~~In due time, before the proposed Celtic interconnector is operational, all TSOs will submit a proposal for amendment of the Determination of CCRs in accordance with Article 9(13) of the CACM Regulation to include the most appropriate incorporation of this bidding zone border and the concerned TSOs.~~
- (12) This Determination of CCRs takes into account the general principles and goals set out in the CACM Regulation as well as in Regulation (EU) 2019/943 of the European Parliament and of the Council on the internal market for electricity (hereafter referred to as the "Electricity Regulation"). The goal of the CACM Regulation is the coordination and harmonisation of capacity calculation and allocation in the day-ahead and intraday cross-border markets, and it sets requirements for the TSOs to cooperate on the level of CCRs, on a pan-European level and across bidding zone borders.
- (13) According to Article 9 (9) of the CACM Regulation, the expected impact of the Determination of CCRs on the objectives of the CACM Regulation has to be described. The impact is presented below taking

into account that the CACM Regulation places the definition of these CCRs as well as the methodologies to be applied in these regions within a framework of continuous harmonisation, applying the most efficient capacity calculation methodology within each CCR.

- (14) This Determination of CCRs contributes to the achievement of the objectives of Article 3 of CACM Regulation. In particular, this Determination of CCRs contributes to ensuring optimal use of transmission infrastructure by linking bidding zone borders, where coordination needs in capacity calculation are high. Within the CCR, the interdependencies between the cross-zonal capacities can be modelled most accurately and efficiently, and the optimal level of cross-zonal capacity can be given to the market, at the cost of increasing complexity in capacity calculation for larger CCRs. This Determination of CCRs aims to strike a balance between both aspects ('larger where currently possible, smaller where currently necessary') and consequently contributes to the optimal use of transmission infrastructure in accordance with Article 3(b) of the CACM Regulation.
- (15) This Determination of CCRs also contributes to operational security in accordance with Article 3(c) of the CACM Regulation. If interdependency between bidding zone borders is not correctly taken into account in capacity calculation, cross-zonal capacity given to the market might be too high, potentially causing overloads on transmission lines and thus, endangering the operational security of the transmission system. Usually in these cases, less cross-zonal capacity would be given to the market to ensure operational security at the expense of optimal use of transmission infrastructure. To the extent currently possible, this Determination of CCRs allows for a proper coordination between bidding zone borders and for modelling of regional features based on a common grid model, which give a high level of cross-zonal capacity to the market without endangering operational security.
- (16) The Determination of CCRs lays the ground for the development and implementation of regional common capacity calculation methodologies, which ensures coordination within the CCRs and thereby contributes to the objective of optimising the calculation and allocation of cross-zonal capacity in accordance with Article 3(d) of the CACM Regulation. The number and size of CCRs as defined in this Determination of CCRs constitutes the most feasible approach for optimising capacity calculation. While for interdependent bidding zone borders capacity calculation and allocation is generally most efficiently performed within one CCR, coordination and compatibility across the regions is also explicitly required by Article 21(1)(b)(vii) and Article 29(9) of the CACM Regulation. By appropriate standardisation and coordination, TSOs should ensure both compatible capacity calculation methodologies across CCRs and a coordinated application of the methodologies across the CCRs.
- (17) The current assignment of the bidding zone border DK1-NL and DK1-DE/LU to the Hansa CCR might be debatable in the light of the objectives to ensure the optimal use of the transmission infrastructure (Article 3(b) of the CACM Regulation) and to optimise the calculation and allocation of cross-zonal capacity (Article 3(d) of the CACM Regulation). However, any alternative CCR configuration at the time of this Determination of CCRs might have negative impacts on important existing implementation

projects and initiatives in the current CCRs, and therefore might hamper the objective of efficient long-term operation and development of the electricity transmission system (Article 3(g) of the CACM Regulation). To ensure that the objectives of Article 3(b), (d) and (g) of the CACM Regulation are respected, this Determination of CCRs foresees a reassessment of the CCR Determination in the future, as prescribed in Article 12, once the objectives of efficiency and optimal use of cross-zonal capacity can be better assessed.

- (18) The coordinated capacity calculation within a CCR could reveal constraining elements in the transmission network, which contributes to the long-term operation and development of the electricity transmission system and electricity sector in the Union. Therefore, the Determination of CCRs contributes to the objective of Article 3(g) of the CACM Regulation.
- (19) As a long-term target, the CACM Regulation aims to harmonise the regional capacity calculation methodologies of CCRs and merge CCRs when efficiency reasons justify doing so. This Determination of CCRs is an important step on the roadmap towards this long-term target. It is crucial that this roadmap is efficient and does not jeopardise progress towards the long-term target. The Determination of CCRs builds, thus, on current practice and existing projects, and represents a progressive and pragmatic harmonisation of capacity calculation.
- (20) The Determination of CCRs contributes to the objective of promoting effective competition in generation, trading and supply of electricity (Article 3(a) of the CACM Regulation), because it takes into account market specificities on bidding zone borders by allowing optimally configured CCRs to be established.
- (21) Regarding the objective of transparency and reliability of information (Article 3(f) of the CACM Regulation), this Determination of CCRs will be the basis for further work towards market integration in a transparent way. It shows where bidding zone borders are fully coordinated in capacity calculation and where all TSOs of each CCR will develop common methodologies as defined in CACM Regulation. These methodologies will be consulted upon, approved by regulatory authorities when applicable and published by TSOs, thus, increasing transparency and reliability of information.
- (22) This Determination of CCRs does not have any material impacts on the other objectives referred to in Article 3 (e), (h), (i) and (j) of the CACM Regulation.
- (23) In conclusion, this Determination of CCRs contributes to the objectives of the CACM Regulation to the benefit of all market participants and electricity end consumers.
- (24) Article 15 of the CACM Regulation requires all TSOs to develop the Determination of CCR methodology. The list of TSOs responsible for the development of the proposal under the relevant legislation and for submitting the respective proposal to ACER is the following: APG - Austrian Power Grid AG, VÜEN-Vorarlberger Übertragungsnetz GmbH, Elia - Elia System Operator S.A., ESO – Electroenergien Systemen Operator EAD, HOPS - Croatian Transmission System Operator [LtdPlc](#), ČEPS - ČEPS, a.s., Energinet -

Energinet, Elering - Elering AS, Fingrid - Fingrid Oyj, Kraftnät Åland Ab, RTE - Réseau de Transport d'Electricité, S.A, Amprion - Amprion GmbH, Baltic Cable AB, TransnetBW -TransnetBW GmbH, TenneT GER - TenneT TSO GmbH, 50Hertz - 50Hertz Transmission GmbH, IPTO - Independent Power Transmission Operator S.A., MAVIR Zrt. - MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság Zrt., EirGrid - EirGrid plc, Terna - Terna SpA, Augstsprieguma tīkls - AS Augstsprieguma tīkls, LITGRID - LITGRID AB, CREOS Luxembourg - CREOS Luxembourg S.A., TenneT TSO - TenneT TSO B.V., Statnett SF, PSE - PSE S.A., REN - Rede Eléctrica Nacional, S.A., Tranelectrica - C.N. Tranelectrica S.A., SEPS - Slovenská elektrizačná prenosová sústava, a.s., ELES - ELES,d.o.o, REE - Red Eléctrica de España S.A.U, Svenska Kraftnät - Affärsverket Svenska Kraftnät and SONI System Operator for Northern Ireland Ltd.

(25) With its letter from 17 July 2023 ACER requests, pursuant to Article 9(13), read in conjunction with Article 9(6) of the CACM Regulation, that all TSOs develop an amendment of the Determination of CCRs to merge Core and Italy North capacity calculation regions for day-ahead capacity calculation. ACER considers it necessary, and in line with the objectives of the CACM Regulation, that CCR Core and CCR ITN are merged and apply a common capacity calculation using the flowbased approach. However, a full merger at this point would have negative impacts on ongoing projects within the existing CCRs, which are not yet implemented (e.g. long-term capacity calculation and ROSC). To this end, ACER considers that a partial merger, for the purpose of the implementation of a common day-ahead capacity calculation methodology, is currently preferable compared to a full merger. A step-wise approach implies a detailed analysis of potential interdependencies among different processes/methodologies developed/applied in CCRs Core and ITN respectively according to Regulations CACM, FCA, EB, SO as well as any other applicable European legislation and the investigation of the most efficient solution in coordination with involved TSOs and NRAs.

(26)It may be beneficial for the achievement of the regulations objectives to enter into certain coordination with non-EU countries. ACER exemplarily considers in its request dated July 17 2023 the high interdependency of the capacity calculation with Switzerland with the regions Italy North and Core. TSOs of both regions have developed or plan to develop solutions for coordination with Switzerland before and after such merger, based on a contractual framework. The merger of Core and ITN would be able to maximally include and coordinate Swiss borders in the capacity calculation process, thus providing the most efficient capacity calculation for the whole Central Europe among all viable alternatives and hence contributing to the objectives of the CACM and the Electricity Regulation.

(27) The coordination with potentially relevant non-EU countries is however dealt with in the respective methodologies of the CCRs, subject to the regular Network Code methodology approval processes.

(28)It needs to be noted that the configuration requested by ACER, i.e. different CCRs in different timeframes, is not foreseen in either of the relevant legislation (CACM, FCA, EB, SO as well as any other applicable European legislation) or methodologies. All TSOs consider the present solution to be temporary as explained in recital (25). Moreover, the solution shall not set a precedent under the

current legal framework for defining any other configurations of CCRs comprising only selected timeframes. Therefore, there might be additional changes required in order not to hinder the implementation of a single electricity market. TSO were not able to perform a detailed assessment due to the very short time given for this amendment but will perform the detailed assessment and identify the issues that need to be solved within the time given for proposing a common capacity calculation methodology for CCRs Central Europe according to Article 7. TSO were able to perform only basic assessment due to very short time given for amendment, so there is a risk that not all issues were identified. So far TSO identified at least three topics which need to be further assessed: (1) interactions between CCM and ROSC, (2) CACM CID, FCA CID and FRC, (3) methodologies in neighbouring CCRs (in particular Hansa).

TITLE 1
General Provisions

Article 1
Subject matter and scope

1. The CCRs cover the following:
 - a) all existing bidding zone borders within and between Member States, to which the CACM Regulation applies;
 - b) future bidding zone borders established as a result of interconnections operated by legal entities certified as TSOs which are under construction at the time of the approval of this Determination of CCRs and planned to be commissioned.
2. Any changes in the bidding zone border configuration of Member States shall be taken into account in proposals for amendments to this document in accordance with Article 9(13) of the CACM Regulation.

Article 2
Definitions and interpretation

1. Terms used in this document shall have the meaning of the definitions included in Article 2 of the CACM Regulation and Article 2 of the Electricity Regulation.
2. In this document, unless the context clearly indicates otherwise:
 - a) the singular also includes the plural and vice versa;
 - b) headings are inserted for convenience only and do not affect the interpretation of this document;
 - 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; and
 - d) in case of inconsistency between any of the provisions in Title 2 and the maps included in the Appendix to this document the provisions in Title 2 shall prevail.
3. This document shall be binding upon and shall ensure to the benefit of the TSOs as referred to herein and their permitted successors and assigns and irrespective of any change in the TSOs' names.

TITLE 2
Capacity Calculation Regions

Article 3
Capacity Calculation Region 1: Nordic

1. The CCR Nordic shall include the bidding zone borders listed below, and shown on map 1 included in the Appendix to this document, as attributed to the referred TSOs:
 - a) Denmark 1 - Sweden 3 (DK1 - SE3), Energinet and Svenska kraftnät;
 - b) Denmark 2 - Sweden 4 (DK2 - SE4), Energinet and Svenska kraftnät;

- c) Denmark 1 - Denmark 2 (DK1 - DK2), Energinet;
 - d) Sweden 4 - Sweden 3 (SE4 - SE3), Svenska kraftnät;
 - e) Sweden 3 - Sweden 2 (SE3 - SE2), Svenska kraftnät;
 - f) Sweden 2 - Sweden 1 (SE2 - SE1), Svenska kraftnät;
 - g) Sweden 3 - Finland (SE3 - FI), Svenska kraftnät, Kraftnät Åland AB and Fingrid Oyj;
 - h) Sweden 1 - Finland (SE1 - FI), Svenska kraftnät and Fingrid Oyj;
 - i) Norway 1 - Norway 2 (NO1 - NO2), Statnett SF;
 - j) Norway 1 - Norway 3 (NO1 - NO3), Statnett SF;
 - k) Norway 1 - Norway 5 (NO1 - NO5), Statnett SF;
 - l) Norway 2 - Norway 5 (NO2 - NO5), Statnett SF;
 - m) Norway 3 - Norway 5 (NO3 - NO5), Statnett SF;
 - n) Norway 3 - Norway 4 (NO3 - NO4), Statnett SF;
 - o) Norway 1 - Sweden 3 (NO1 - SE3), Statnett SF and Svenska kraftnät;
 - p) Norway 3 - Sweden 2 (NO3 - SE2), Statnett SF and Svenska kraftnät;
 - q) Norway 4 - Sweden 2 (NO4 - SE2), Statnett SF and Svenska kraftnät;
 - r) Norway 4 - Sweden 1 (NO4 - SE1), Statnett SF and Svenska kraftnät;
 - s) Norway 4 - Finland (NO4 - FI), Statnett SF and Fingrid Oyj; and
 - t) Norway 2 - Denmark 1 (NO2 - DK1), Statnett SF and Energinet.
2. The NO4-FI bidding zone border shall be included in the market coupling and capacity calculation process from the go-live of flow-based capacity calculation in CCR Nordic onwards.

Article 4 **Capacity Calculation Region 2: Hansa**

The CCR Hansa shall include the bidding zone borders listed below, and shown on map 2 included in the Appendix to this document, as attributed to the referred TSOs:

- a) Denmark 1 - Germany/Luxembourg (DK1 - DE/LU), Energinet and TenneT TSO GmbH;
- b) Denmark 2 - Germany/Luxembourg (DK2 - DE/LU), Energinet and 50Hertz Transmission GmbH;
- c) Sweden 4 - Poland (SE4 - PL), Svenska Kraftnät and Polskie Sieci Elektroenergetyczne S.A.;
- d) Denmark 1 - Netherlands (DK1 - NL), Energinet and TenneT TSO B.V.;
- e) Sweden 4 - Germany/Luxembourg (SE4 - DE/LU), Svenska Kraftnät, TenneT TSO GmbH and Baltic Cable AB;
- f) Norway 2 - Netherlands (NO2 - NL), Statnett SF and TenneT TSO B.V.; and
- g) Norway 2 - Germany/Luxembourg (NO2 - DE/LU), Statnett SF and TenneT TSO GmbH.

Article 5 Capacity Calculation Region 3: Core

1. Without prejudice to Article 7, the CCR Core shall include the bidding zone borders listed below, and shown on map 3 included in the Appendix to this document, as attributed to the referred TSOs:
 - a) France - Belgium (FR - BE), RTE - Réseau de transport d'électricité and Elia Transmission Belgium NV/SA;
 - b) Belgium - Netherlands (BE - NL), Elia Transmission Belgium NV/SA and TenneT TSO B.V.;
 - c) France - Germany/Luxembourg (FR - DE/LU), RTE - Réseau de transport d'électricité; Amprion GmbH and TransnetBW GmbH;
 - d) Netherlands - Germany/Luxembourg (NL - DE/LU), TenneT TSO B.V., TenneT TSO GmbH and Amprion GmbH;
 - e) Belgium - Germany/Luxembourg (BE - DE/LU), Elia Transmission Belgium NV/SA, Creos Luxembourg S.A. and Amprion GmbH;
 - f) Germany/Luxembourg - Poland (DE/LU - PL), 50Hertz Transmission GmbH and Polskie Sieci Elektroenergetyczne S.A.;
 - g) Germany/Luxembourg - Czech Republic (DE/LU - CZ), TenneT TSO GmbH, 50Hertz Transmission GmbH and ČEPS, a.s.;
 - h) Austria - Czech Republic (AT - CZ), Austrian Power Grid AG and ČEPS, a.s.;
 - i) Austria - Hungary (AT - HU), Austrian Power Grid AG and MAVIR Hungarian Independent Transmission Operator Company Ltd.;
 - j) Austria - Slovenia (AT - SI), Austrian Power Grid AG and ELES, d.o.o.;
 - k) Czech Republic - Slovakia (CZ - SK), ČEPS, a.s. and Slovenská elektrizačná prenosová sústava, a.s.;
 - l) Czech Republic - Poland (CZ - PL), ČEPS, a.s. and Polskie Sieci Elektroenergetyczne S.A.;
 - m) Hungary - Slovakia (HU - SK), MAVIR Hungarian Independent Transmission Operator Company Ltd. and Slovenská elektrizačná prenosová sústava, a.s.;
 - n) Poland - Slovakia (PL - SK), Polskie Sieci Elektroenergetyczne S.A. and Slovenská elektrizačná prenosová sústava, a.s.;
 - o) Croatia - Slovenia (HR - SI), Croatian Transmission System Operator [LtdPlc.](#) (HOPS d.~~de-e.~~) and ELES, d.o.o.;
 - p) Croatia - Hungary (HR - HU), Croatian Transmission System Operator [LtdPlc.](#) (HOPS d.~~de-e.~~) and MAVIR Hungarian Independent Transmission Operator Company Ltd.;
 - q) Romania - Hungary (RO - HU), Compania Națională de Transport al Energiei Electrice "Transelectrica" S.A. and MAVIR Hungarian Independent Transmission Operator Company Ltd.;
 - r) Hungary - Slovenia (HU - SI), MAVIR Hungarian Independent Transmission Operator Company Ltd. and ELES, d.o.o.; and
 - s) Germany/Luxembourg - Austria (DE/LU - AT), Austrian Power Grid AG, TransnetBW GmbH, TenneT TSO GmbH and Amprion GmbH;

t) Single Electricity Market in Ireland and Northern Ireland – France (SEM-FR), EirGrid - EirGrid plc and RTE - Réseau de transport d'électricité.

2. The assignment of the bidding zone border FR-SEM to the CCR Core shall be effective from the date of operation of the interconnector on the respective bidding zone border.

3. In order to accommodate the specific case of Single Electricity Market in the territories of Ireland and Northern Ireland, SONI is also attributed to the CORE CCR.

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Article 6 **Capacity Calculation Region 4: Italy North**

Without prejudice to Article 7, the CCR Italy North shall include the bidding zone borders listed below, and shown on map 4 included in the Appendix to this document, as attributed to the referred TSOs:

- a) Italy NORD - France (NORD - FR), TERNA Rete Elettrica Nazionale S.p.A. and RTE - Réseau de transport d'électricité;
- b) Italy NORD - Austria (NORD - AT), TERNA Rete Elettrica Nazionale S.p.A. and Austrian Power Grid AG; and
- c) Italy NORD - Slovenia (NORD - SI), TERNA Rete Elettrica Nazionale S.p.A. and ELES d.o.o..

Article 7 **Capacity Calculation Region 5: Central Europe**

CCR Central Europe shall include all bidding zone borders and attributed TSOs listed in Articles 5 and 6 and shown on map 5 included in the Appendix to this document.

For the time being solely the capacity calculation methodology in the day-ahead timeframe pursuant to Article 20 of the CACM Regulation shall be implemented in CCR Central Europe. The day-ahead capacity calculation methodology shall be submitted no later than 12 months after approval of the proposal for a Determination of CCRs.

All the other CCR-related obligations according to CACM, FCA, EB, SO as well as any other applicable European legislation shall apply to the CCR Central Europe at the latest in the final stage of the merge of the CCRs. This further merge of the CCRs Core and Italy-North shall be implemented using a stepwise approach. The involved TSOs and NRAs will agree on the respective steps and timeline based on the progress of the existing regional implementation projects and develop a concept for the merge of all other CCR-related obligations. All TSOs shall provide an amendment of this methodology at the latest at the time of the implementation of DA CCM in the Central Europe.

Article 8

Capacity Calculation Region 6: Greece-Italy (GRIT)

The CCR GRIT shall include the bidding zone borders listed below, and shown on map 5 included in the Appendix to this document, as attributed to the referred TSOs:

- a) Italy SUD - Greece (SUD - GR), TERNA Rete Elettrica Nazionale S.p.A. and Independent Power Transmission Operator S.A.;
- b) Italy NORD - Italy CNOR (NORD - CNOR), TERNA Rete Elettrica Nazionale S.p.A.;
- c) Italy CNOR - Italy CSUD (CNOR - CSUD), TERNA Rete Elettrica Nazionale S.p.A.;
- d) Italy CNOR - Italy SARD (CNOR - SARD), TERNA Rete Elettrica Nazionale S.p.A.;
- e) Italy SARD - Italy CSUD (SARD - CSUD), TERNA Rete Elettrica Nazionale S.p.A.;
- f) Italy CSUD - Italy SUD (CSUD - SUD), TERNA Rete Elettrica Nazionale S.p.A.;
- g) Italy SUD - Italy CALA (SUD - CALA), TERNA Rete Elettrica Nazionale S.p.A.; and
- h) Italy CALA - Italy SICI (CALA - SICI), TERNA Rete Elettrica Nazionale S.p.A..

Article 9

Capacity Calculation Region 7: South-west Europe (SWE)

The CCR SWE shall include the bidding zone borders listed below, and shown on map 6 included in the Appendix to this document, as attributed to the referred TSOs:

- a) France - Spain (FR - ES), RTE - Réseau de transport d'électricité and REE - Red Eléctrica de España, S.A.U.; and
- b) Spain - Portugal (ES - PT), REE - Red Eléctrica de España, S.A.U. and REN - Rede Eléctrica Nacional, S.A..

Article 10

Capacity Calculation Region 8: Baltic

The CCR Baltic shall include the bidding zone borders listed below, and shown on map 7 included in the Appendix to this document, as attributed to the referred TSOs:

- a) Estonia - Latvia (EE - LV), Elering AS and Augstsprieguma tīkls;
- b) Latvia - Lithuania (LV - LT), Augstsprieguma tīkls and Litgrid AB;
- c) Estonia - Finland (EE - FI), Elering AS and Fingrid Oyj;
- d) Lithuania – Sweden 4 (LT - SE4), Litgrid AB and Svenska kraftnät; and
- e) Lithuania - Poland (LT - PL), Litgrid AB and Polskie Sieci Elektroenergetyczne S.A..

Article 11

Capacity Calculation Region 9: South-east Europe (SEE)

The CCR SEE shall include the bidding zone borders listed below, and shown on map 8 included in the Appendix to this document, as attributed to the referred TSOs:

- a) Greece - Bulgaria (GR - BG), Independent Power Transmission Operator S.A. and Elektroenergien Systemen Operator (ESO) EAD; and
- b) Bulgaria - Romania (BG - RO), Elektroenergien Systemen Operator (ESO) EAD and Compania Națională de Transport al Energiei Electrice "Transelectrica" S.A..

TITLE 3 Final provisions

Article 12 Implementation date of CCRs

All TSOs shall apply the CCRs as described in Title 2 as soon as the decision has been taken by ACER in accordance with Article 9(6)(b) of the CACM Regulation and Article 5(2)(b) Regulation (EU) 2019/942.

Article 13 Future assessment

1. No later than three months after the implementation of the first version of the regional operational security coordination in accordance with Article 76(1) of Commission Regulation 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as the "SO Regulation") in the Core CCR, all TSOs shall submit to ACER an assessment analysing alternative determinations of at least the CCRs Hansa, Nordic and Core in terms of:
 - (a) efficiency of capacity calculation and allocation in all timeframes; and
 - (b) efficiency of regional operational security coordination in accordance with Article 76(1) of the SO Regulation, coordinated redispatching and countertrading in accordance with Article 35 of the CACM Regulation and redispatching and countertrading cost sharing in accordance with Article 74 of the CACM Regulation and cross-regional operational security coordination in accordance with Article 75(1) of the SO Regulation.
2. In case this assessment pursuant to paragraph (1) identifies a more efficient alternative Determination of CCRs, all TSOs shall submit to ACER a proposal for amendment of the Determination of CCRs in accordance with Article 9(13) of the CACM Regulation by the same deadline as for the assessment.

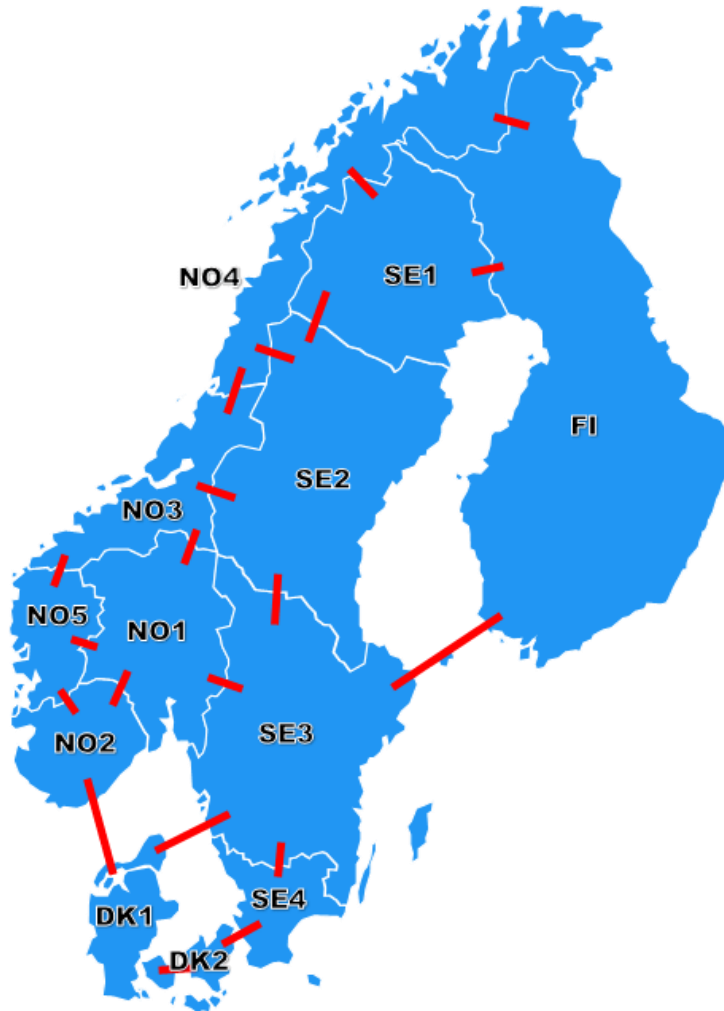
Article 14 Language

The reference language for this document shall be English. For the avoidance of doubt, where TSOs need to translate this document into their national language(s), in the event of inconsistencies between the English

version published by all TSOs in accordance with Article 9(14) of the CACM Regulation and any version in another language, the relevant TSOs shall, in accordance with national legislation, provide the relevant national regulatory authorities with translation of this document.

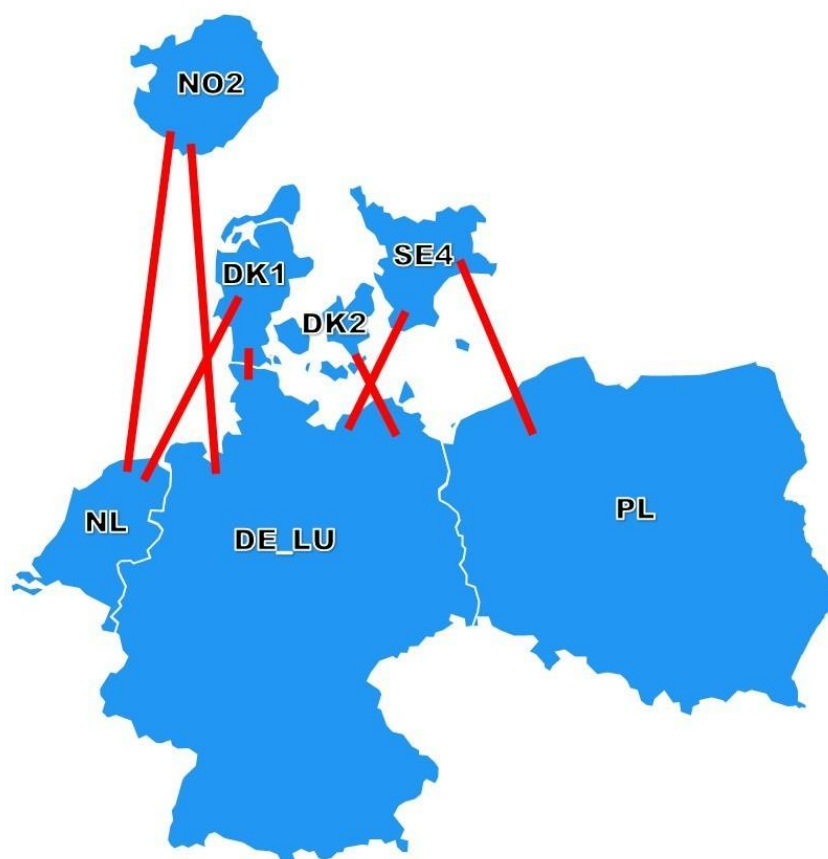
Appendix: Maps of the proposed CCRs

1. Capacity Calculation Region 1: Nordic



2. Capacity Calculation Region 2: Hansa

Note: The DE/LU - PL, NL - DE/LU, NO2 - DK1, DK2 - SE4 and DK1 - DK2 bidding zone borders are not part of this CCR.

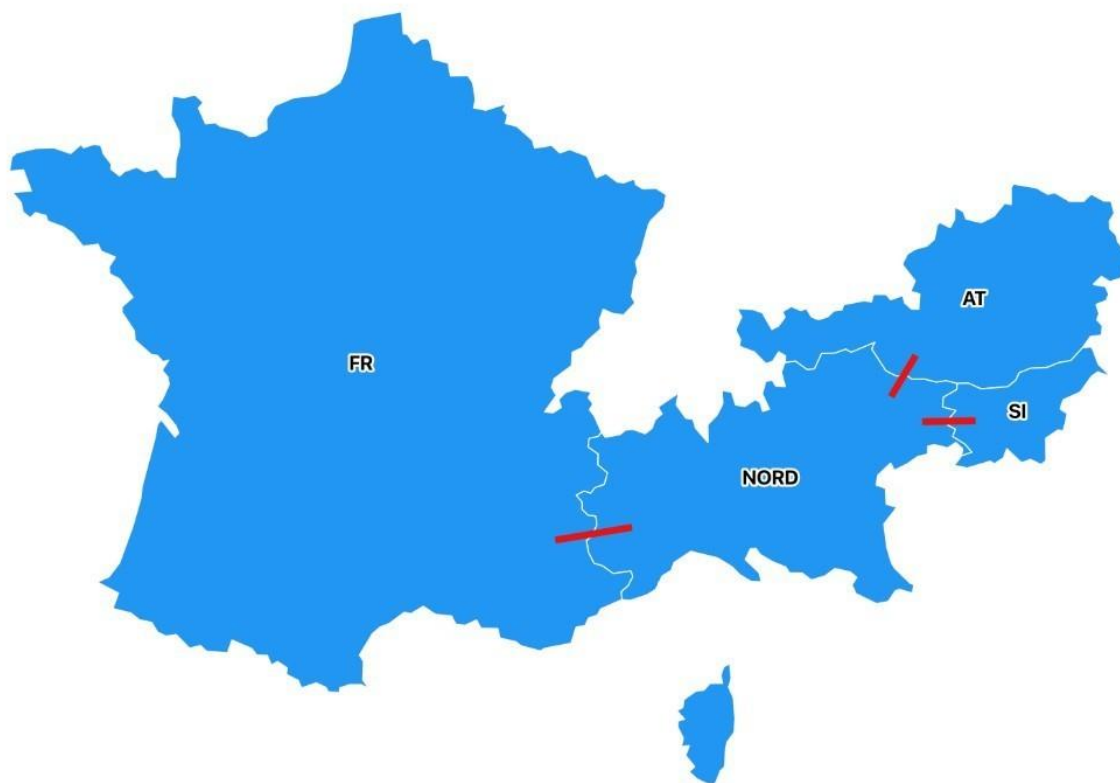


3. Capacity Calculation Region 3: Core



4. Capacity Calculation Region 4: Italy North

Note: The AT-SI bidding zone border is not part of this CCR.



5. Capacity Calculation Region 5: Central Europe



5.6. Capacity Calculation Region 6: Greece-Italy (GRIT)



6.7. Capacity Calculation Region 7: South-west Europe (SWE)



7.8. Capacity Calculation Region 8: Baltic

Note: The SE4-PL bidding zone border is not part of this CCR.



8.9. Capacity Calculation Region 9: South-east Europe (SEE)



Annex 1

List of TSOs subject to the approved CACM CID methodology:

- [APG - Austrian Power Grid AG,](#)
- [VÜEN-Vorarlberger Übertragungsnetz GmbH](#)
- [Elia - Elia Transmission Belgium S.A.](#)
- [ESO – Electroenergien Sistemen Operator EAD](#)
- [HOPS d.d. - Croatian Transmission System Operator Plc.](#)
- [ČEPS - ČEPS, a.s.](#)
- [Energinet – Energinet](#)
- [Elering - Elering AS](#)
- [Fingrid - Fingrid Oyj](#)
- [Kraftnät - Kraftnät Åland Ab](#)
- [RTE - Réseau de Transport d'Electricité S.A](#)
- [Amprion - Amprion GmbH](#)
- [BCAB - Baltic Cable AB](#)
- [TransnetBW -TransnetBW GmbH](#)
- [TenneT GER - TenneT TSO GmbH](#)
- [50Hertz - 50Hertz Transmission GmbH](#)
- [IPTO - Independent Power Transmission Operator S.A.,](#)
- [MAVIR ZRt. - MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság ZRt.](#)
- [EirGrid - EirGrid plc](#)
- [Terna - Terna SpA](#)
- [Augstsprieguma tīkls - AS Augstsprieguma tīkls](#)
- [LITGRID - LITGRID AB](#)
- [CREOS Luxembourg - CREOS Luxembourg S.A.](#)
- [TenneT TSO - TenneT TSO B.V.](#)
- [PSE - Polskie Sieci Elektroenergetyczne S.A.](#)
- [REN - Rede Eléctrica Nacional, S.A.](#)
- [Transelectrica - Compania Nationala de Transport al Energiei Electrice S.A.](#)
- [SEPS - Slovenská elektrizačná prenosová sústava, a.s](#)
- [ELES - ELES,d.o.o](#)
- [REE - Red Eléctrica de España S.A.U,](#)
- [Svenska Kraftnät - Affärsverket Svenska Kraftnät](#)
- [SONI - System Operator for Northern Ireland Ltd](#)