European Network of
Transmission System Operators
for Electricity

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Explanatory document to all TSOs' proposal for Capacity Calculation Regions (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

29 October 2015

Disclaimer

This explanatory document is submitted by all TSOs to all NRAs for information purposes only accompanying the "All TSOs' proposal for Capacity Calculation Regions (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". It contains in depth justification on the proposed CCRs and a summary of the assessment of the stakeholders' comments received during the public consultation.

Contents

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1. Introduction

This document is an explanatory document developed by all Transmission System Operators (hereafter referred to as "TSOs") providing details and background information regarding the common proposal for the determination of capacity calculation regions (hereafter referred to as "CCRs Proposal") as submitted by TSOs to all regulatory authorities in accordance with Article 15 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (hereafter referred to as "CACM Regulation").

This explanatory document includes a chapter about the relevant legal provisions of the CACM Regulation (Chapter 2). Chapter 3 provides justification and further description of the proposed set of capacity calculation regions (hereafter referred to as "CCR(s)"), including indicative maps covering the existing bidding zone borders between European Union (EU) Members States and new ones expected to be established by the end of 2018 and to be operated by TSOs certified at the moment of submission of the CCRs Proposal.

This explanatory document also presents the assessment of the stakeholders comments submitted during the public consultation which took place between August 24th and September 24th 2015. A dedicated chapter (Chapter 4) includes the summary of the assessment of the general stakeholders' comments whereas the specific comments received by stakeholders on each CCR and their assessment are presented in the description of each CCR included in Chapter 3.

Several annexes are also added to this explanatory document. Annex 1 deals with the future composition of CCRs including various non-EU bidding zone borders. To achieve the targets set in the CACM Regulation to promote the completion and efficient functioning of the internal market and ensure optimal management, coordinated operation and sound technical development of the electricity transmission system in Europe, EC, ACER, regulatory authorities, TSOs and ENTSO-E acknowledge the importance of involving European non-EU TSO members of ENTSO-E, especially those responsible for electricity systems physically connected to EU Member States, in defining the CCRs. TSOs believe this is the best way forward to ensure the efficiency, relevance and accuracy of the capacity calculation processes.

The composition of the CCRs presented in Annex 1 reflects the interdependencies between EU and non-EU bidding zones borders as well as the cooperation between some non-EU and EU TSOs, and it forms the basis for future implementation of the CACM Regulation by non-EU TSOs/non-EU regulatory authorities. To avoid any doubt, such CCRs composition can only take legal effect when the legal conditions for the integration of the CACM Regulation are fulfilled in the non-EU countries, e.g., when the CACM Regulation becomes an effective law within the legal framework of each of these countries and respective NRA approvals take place as required at that point. TSOs expect that these legal conditions will be fulfilled in some non-EU countries by the time the capacity calculation methodologies developed by the CCRs will be approved by all regulatory authorities of each capacity calculation region (i.e. at the latest 25 months after the entry into force of the CACM Regulation). Thus, to facilitate the implementation by the non-EU TSOs and the cooperation of the EU and non-EU regulatory authorities at an early stage, within the legal boundaries set by EU or national laws, the involved TSOs (EU and non-EU) will start working informally together based on the future CCRs composition presented in Annex 1 to achieve the targets set in the CACM Regulation to promote the completion and efficient functioning of internal markets and in order to ensure the optimal management, coordinated operation and sound technical development of the electricity transmission system in Europe.

EC, ACER, TSOs and ENTSO-E agree to work from the beginning to implement the CCRs as proposed in Annex 1 to the CCRs Proposal to achieve the target of efficiency in Europe. However, the capacity calculation methodologies shall be designed in such a way that they can be performed in a robust manner even before

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the non-EU countries included in the CCRs are bound to apply the EU rules. In no case shall the capacity calculation be critically dependent on a third country not bound by EU rules.

Annex 2 of this explanatory document includes an overview of future bidding zone borders for informational purposes only, describing some new bidding zone borders to be included in the proposed CCRs in the future. These interconnections are some which will be under construction and commissioned after 2018 or which are not yet operated by legal entities certified as TSOs. Any changes in the future will have to be reflected in the CCRs composition by amending the CCRs Proposal in accordance with the CACM Regulation.

Annex 3 presents a possible roadmap for CCRs integration whereas Annex 4 contains the detailed comments received on the draft CCRs Proposal during the public consultation.

2. Legal requirements for the CCR determination

Capacity calculation for the day-ahead and intraday market timeframes should be coordinated at least at the regional level to ensure that capacity calculation is reliable and that optimal capacity is made available to the market. For this purpose, regions where such coordination is needed need to be defined by TSOs. In accordance with Article 2 of CACM Regulation (Definitions), these regions are defined as "capacity calculation regions", meaning "the geographic area in which coordinated capacity calculation is applied". Therefore, a CCR needs to be comprised of a set of bidding zone borders for which the capacity calculation shall be coordinated by TSOs in accordance with the CACM Regulation.

Article 9(9) requires that the description of the expected impact on the objectives set in Article 3 of the CACM Regulation is included in the CCRs Proposal along with a proposed timescale for the implementation. It provides the following requirements.

> *"The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within three months on the proposals for terms and conditions or methodologies."*

Article 3 defines the objectives of the CACM Regulation as follows:

> *"This Regulation aims at:*
>
> *(a) promoting effective competition in the generation, trading and supply of electricity;*
>
> *(b) ensuring optimal use of the transmission infrastructure;*
>
> *(c) ensuring operational security;*
>
> *(d) optimising the calculation and allocation of cross-zonal capacity;*
>
> *(e) ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;*
>
> *(f) ensuring and enhancing the transparency and reliability of information;*
>
> *(g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union;*
>
> *(h) respecting the need for a fair and orderly market and fair and orderly price formation;*
>
> *(i) creating a level playing field for NEMOs;*

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(j) providing non-discriminatory access to cross-zonal capacity."

How the objectives of the CACM Regulation are impacted by the proposed CCRs is presented in the "Whereas" part of the CCRs Proposal.

Article 15 of the CACM Regulation sets further the requirements for the determination of CCRs as follows:

> *"1. By three months after the entry into force of this Regulation all TSOs shall jointly develop a common proposal regarding the determination of capacity calculation regions. The proposal shall be subject to consultation in accordance with Article 10.*
>
> *2. The proposal referred to in paragraph 1 shall define the bidding zone borders attributed to TSOs who are members of each capacity calculation region. The following requirements shall be met:*
>
> *(a) it shall take into consideration the regions specified in point 3(2) of Annex I to Regulation (EC) No 714/2009;*
>
> *(b) each bidding zone border, or two separate bidding zone borders if applicable, through which interconnection between two bidding zones exists, shall be assigned to one capacity calculation region;*
>
> *(c) at least those TSOs shall be assigned to all capacity calculation regions in which they have bidding zone borders.*
>
> *3. Capacity calculation regions applying a flow-based approach shall be merged into one capacity calculation region if the following cumulative conditions are fulfilled:*
>
> *(a) their transmission systems are directly linked to each other;*
>
> *(b) they participate in the same single day-ahead or intraday coupling area;*
>
> *(c) merging them is more efficient than keeping them separate. The competent regulatory authorities may request a joint cost-benefit analysis from the TSOs concerned to assess the efficiency of the merger."*

The CCRs Proposal fulfils the above mentioned legal requirements of the CACM Regulation as presented below in Chapter 3.

3. Proposal for Capacity Calculation Regions

3.1. Compliance with the legal requirements and general principles

The CCRs proposal takes into account the general principles and goals set in the CACM Regulation as well as Regulation (EC) No 714/2009. 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. To achieve this, the CACM Regulation requires the definition of CCRs in which coordinated capacity calculation is applied and introduced.

In particular, based on the CACM regulation, the following terms and conditions or methodologies shall be developed and approved on a CCR level:

(a) the common capacity calculation methodology in accordance with Article 20;

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(b) the methodology for coordinated redispatching and countertrading in accordance with Article 35(1);

(c) the fallback procedures in accordance with Article 44; and

(d) the redispatching or countertrading cost sharing methodology in accordance with Article 74(1).

The obligations and rights related to CCRs as determined in the CACM Regulation remain with the TSOs assigned to the respective CCR. To take into account interdependencies between capacity calculation, security analysis coordination and outage scheduling, TSOs should coordinate with TSOs beyond their respective CCR. For each CCR, a coordinated capacity calculator needs to be established to define cross-zonal capacities for day-ahead, intraday timeframes and long-term timeframes using the European Common Grid Model (hereafter referred to as "CGM") by extracting relevant parts of data from the CGM. To further ensure coordination of capacity calculation between the CCRs, each coordinated capacity calculator will cooperate with the neighbouring coordinated capacity calculators.

The CCRs Proposal takes into consideration the regions specified in point 3(2) of Annex I to Regulation (EC) No 714/2009. The CCRs Proposal also includes all existing bidding zone borders from EU Member States that joined the EU after the entry into force of Annex I of Regulation (EC) No 714/2009 and that were not yet listed in Annex I. The CCRs in this proposal are further adapted to the legal requirements of the CACM Regulation mentioned above in order to reflect a better coordination foreseen in the near future regarding the capacity calculation and the progressive introduction of flow-based approach (when applicable). It also takes into account that the goal of coordinated congestion management methods between the neighbouring regions required in Annex I of Regulation (EC) No 714/2009 is reinforced by Article 29(9) of CACM Regulation, which requires cooperation between neighbouring coordinated capacity calculators regarding exchanging and confirming information on interdependency with the relevant regional coordinated capacity calculators. Such a dynamic approach is in line with Regulation (EC) No 714/2009 (see recital 7 of this Regulation), which requires Member States to promote cooperation and monitor the effectiveness of the network at the regional level so cooperation at regional level is compatible with progress towards a competitive and efficient internal market in electricity.

Each existing bidding zone border where CACM obligations are in force has been assigned only to one CCR in accordance with Article 15 of CACM Regulation. In addition, some bidding zone borders to be created by construction of new interconnections foreseen to be commissioned by the end of 2018 and to be operated by TSOs certified at the moment of submission of the CCRs Proposal, are also proposed to be included in the respective CCR (one for each) so as to receive an early all regulatory authorities' approval.

In conclusion, the CCRs Proposal represents a dynamic and pragmatic pan-European approach with a pragmatic view of the geographical scope of CCRs that supports coordination across the bidding zone borders where there is the highest observed interdependence. The need for larger CCRs will be assessed in the mid-term by the relevant TSOs after some experience on coordination within a CCR and between CCRs in accordance with the CACM Regulation has been gained. In this sense, the proposed CCRs represent the optimal and most logical platform (procedure-wise) for a technically feasible step-by-step European CCRs integration.

Figure 1 presents the rough geographic location of the proposed eleven (11) CCRs (without prejudice to the changes presented in Chapters 3.2 to 3.12 and Annex 1), and Figures 2-12 present in more detail the bidding zones, which are connected through a bidding zone border in each of the proposed CCR via one or more interconnections. The figures in Annex 1 present the bidding zones of the same CCRs taking into account their future composition including various non-EU bidding zone borders.

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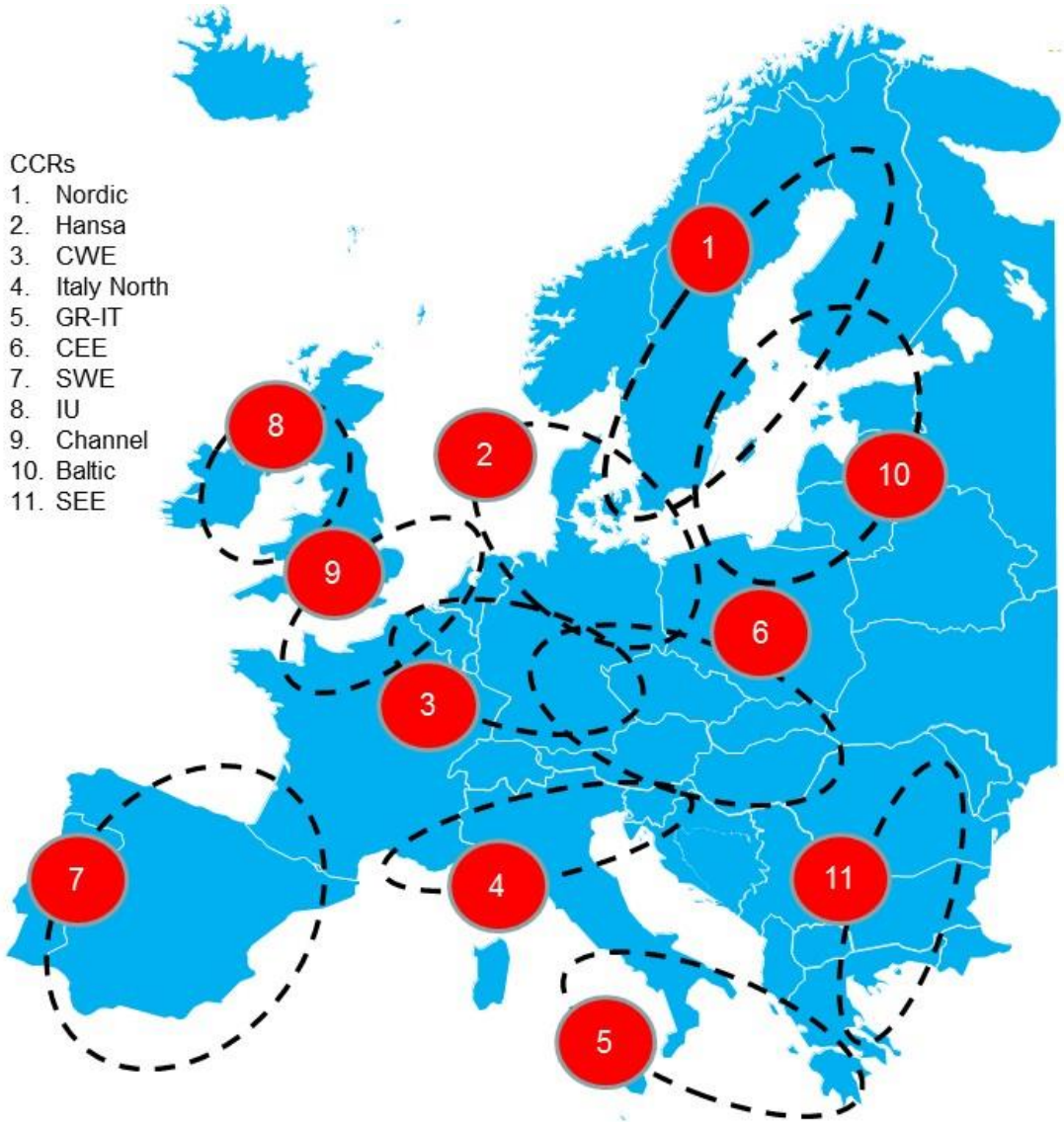

Figure 1. Rough geographic location of the proposed CCRs (without prejudice to the changes presented in Chapters 3.2 to 3.12 and Annex 1).

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3.2. Capacity Calculation Region 1: Nordic

The CCR Nordic should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone borders	TSOs involved	Regulatory authorities involved[1]	Member States involved
Denmark 1 – Sweden 3 (DK1-SE3) Denmark 2 – Sweden 4 (DK2-SE4) Denmark 1 – Denmark 2 (DK1-DK2) Sweden 4 – Sweden 3 (SE4-SE3) Sweden 3 – Sweden 2 (SE3-SE2) Sweden 2 – Sweden 1 (SE2-SE1) Sweden 3 – Finland (SE3-FI) Sweden 1 – Finland (SE1-FI)	Energinet.dk, Svenska kraftnät, Fingrid Oyj	DERA, EI, Energy Authority	Denmark, Sweden, Finland

The CCR Nordic is a part of the region "Northern Europe" as defined in point 3(2) of Annex 1 to Regulation (EC) No 714/2009 and consists of the eight bidding zone borders connecting Denmark, Sweden and Finland, i.e., Member States within the Nordic area (hereafter referred to as the "Nordic Area") and internal bidding zone borders within Denmark and Sweden as indicated in the table above.

The assignment of these bidding zone borders to the CCR Nordic takes into account that the high-voltage electricity systems in the CCR Nordic are well developed and closely integrated. In addition, it reflects the present market conditions, including regulation power, day-ahead, intraday and financial markets. Based on this strong interdependency between these bidding zone borders, coordinated procedures already exist on capacity calculation, including arrangements on remedial actions and cost sharing. Moreover, Article 20 paragraph 1 of CACM Regulation stipulates that there must be one *common* capacity calculation methodology per CCR. Thus, the CCRs Proposal will also allow the involved TSOs to assess the possibility and prepare for the application of flow-based capacity calculation methodology therein.

Other bidding zone borders belonging to the region "Northern Europe" as defined in point 3(2) of Annex 1 to Regulation (EC) No 714/2009 have been assigned to the CCR Hansa. Justification for this CCR is included in Chapter 3.3 below.

[1]Names of all NRAs and their abbreviations can be found at: http://www.acer.europa.eu/The_agency/Organisation/Board_of_Regulators/Pages/BoR-Members.aspx.

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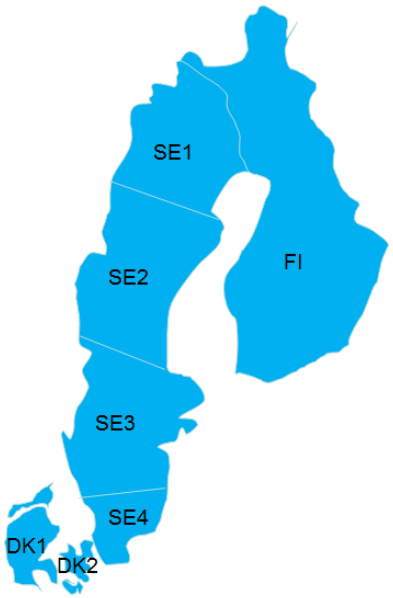
Specific stakeholders' comments - assessment

Three responses were received during public consultation specifically on the CCR Nordic. All of them supported the CCR Nordic implying no change request from stakeholders. However, one respondent recognised the need for the CCR Nordic to cooperate with Norway and requested a swift incorporation of the Norwegian borders. Two respondents stated that the CCRs Proposal allows regional development in the best interest of the internal market and European consumers. These respondents perceive deepened regional co-operation as the way forward towards the Internal Energy market (IEM). With reference to this high-level view, they gave full support to the proposal as it allows further integration and development on the regional scale, thus, providing active contribution to the fulfilment of the EU energy policy goals. This also means that the Nordic market can continue to develop and possibly deepen existing cooperation among the TSOs.

Figure 2: Bidding zones of the CCR Nordic



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3.3. Capacity Calculation Region 2: Hansa

The CCR Hansa should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	Regulatory authorities involved	Member States involved
Denmark 1 – Germany/Luxembourg (DK1-DE/LU) Denmark 2 – Germany/Luxembourg (DK2-DE/LU) Sweden 4 – Poland (SE4 – PL)	Energinet.dk, TenneT TSO GmbH, 50Hertz Transmission GmbH, Svenska Kraftnät and PSE S.A	DERA, BNetzA, EI, URE	Denmark, Germany, Sweden, Poland

The CCC Hansa is a part of the region "Northern Europe" as defined in point 3(2) of Annex 1 to Regulation (EC) No 714/2009 and consists of three bidding zone borders between the Nordic Area and continental Europe.

The assignment of these bidding zone borders in the CCR Hansa takes into account that a) on the one hand, the interconnections in this CCR are closely linked to the electricity systems in the Nordic area as well as the ones in continental Europe, and b) on the other hand, one common capacity calculation methodology per CCR is allowed as stipulated in Article 20 paragraph 1 of CACM Regulation, which may be difficult to develop and implement efficiently on the bidding zone borders forming the CCR Hansa if these borders would be assigned to the CCR Nordic or the CWE/CEE CCRs. In addition, the CCR Hansa reflects the influence between the market conditions at the respective bidding zone borders.

Moreover, Article 20 paragraph 1 of CACM Regulation stipulates that there must be one *common* capacity calculation methodology per CCR. The CCRs Proposal supports various possibilities for capacity calculation methodologies to ensure efficiency in capacity calculation. In particular, the definition of the CCR Hansa allows for the evolution of CCRs and should facilitate the involvement of these bidding zone borders in CWE/CEE/Nordic regions as the level of interconnection increases in the future from Nordic countries to Continental Europe.

Specific stakeholders' comments - assessment

Three responses were received during public consultation specifically on the CCR Hansa. Generally, all respondents agreed with the proposed composition of the CCR Hansa, whereas two respondents, making identical comments, suggested that the CCR Hansa should be kept separate as long as the CCRs of Nordic, CWE and CEE do not apply the same capacity calculation methodology (i.e. flow-based vs. coordinated net transfer capacity) but that these CCRs should be merged if they apply the same capacity calculation methodology. One respondent agreed with the proposed composition of the CCR Hansa, while recognising the need of cooperation with Norway and encouraging Norway to implement the CACM Regulation swiftly in order to include the Norwegian bidding zone borders in the CCR Hansa as soon as possible.

Two respondents stated the need for more clarification of how the TSOs assigned to the CCR Hansa will work in practice. As to their understanding, the CCR Hansa consists only of bidding zone borders between

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two CCRs and does not have any generation or load within the CCR; therefore, they assume that the CCR Hansa should use the coordinated net transfer capacity methodology.

The TSOs involved in the CCR Hansa are fully aware of the need for a close cooperation with the Norwegian TSO and recognise the need to assign the bidding zone border NO2-NL to the CCR Hansa as soon as the legal requirements for the application of CACM Regulation in Norway are fulfilled.

The reasons for proposing to establish a (separate) Hansa CCR instead of having the relevant bidding zone borders included in one of the CCRs Nordic, CWE or CEE are technical ones as explained below.

The CCRs Nordic, CWE and CEE have meshed AC transmission grids. Therefore, the capacity calculation methodologies to be developed for each of these CCRs must address issues such as dynamic stability, voltage stability, transit flows, loop flows and reserves needed to cope with system imbalances (including automatic remedial actions). In contrast, the CCR Hansa is proposed to consist solely of radial DC and AC links. As DC links are fully controllable and the only AC link to be assigned to the CCR Hansa is radial interconnection, the capacity calculation methodology to be developed for the CCR Hansa as a separate CCR can be less complex and easier to implement.

In accordance with Article 20(2) of CACM Regulation, TSOs in a particular CCR shall apply a common capacity calculation methodology. So far, TSOs don't have any experience of the efficiency with a flow based capacity calculation methodology for a region with an AC transmission grid which includes numerous DC interconnectors. Such an experience would be needed in case CCR Hansa has to be merged with (one of) the adjacent CCRs due to the facts that i) in CWE, a flow based capacity calculation methodology has been implemented since 20th May 2015 and ii) both Nordic and CEE TSOs are currently in the process of designing a flow based capacity calculation methodology for their respective region.

Therefore, it seems to be reasonable to keep the CCR Hansa as a separate CCR as long as flow based capacity calculation methodology has not been implemented in all three adjoining CCRs (Nordic, CWE and CEE CCRs). Once this target has been reached, the CCR Hansa could be merged with one of or all the adjacent CCRs. However, that decision needs to be based on an assessment of what is more beneficial, i.e. to merge the CCR Hansa with the regions using flow based with AC and DC links or only to merge it with regions using flow based with AC links. As already mentioned, the CCR Hansa is deemed to be a temporary CCR and Annex 3 of this explanatory document explains the possible mergers.

1. Figure 3: Bidding zones of the CCR Hansa (PL-DE/LU, DK2-SE4 and DK1-DK2 bidding zone borders are not part of this CCR)

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3.4. Capacity Calculation Region 3: Central-west Europe (CWE)

The CCR CWE should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone borders	TSOs involved	Regulatory authorities involved	Member States involved
France - Belgium (FR - BE) Belgium - Netherlands (BE - NL) France - Germany/Luxembourg (FR - DE/LU) Netherlands - Germany/Luxembourg (NL - DE/LU)	RTE – Réseau de transport d'électricité, Elia System Operator NV/SA, TenneT TSO B.V, Amprion GmbH and TransnetBW GmbH, TenneT TSO GmbH, Creos Luxembourg S.A., For coordination purposes: 50Hertz Transmission GmbH and Austrian Power Grid AG	CREG, CRE, ACM, BNetzA, ILR For coordination purposes: E-Control	Belgium, France, The Netherlands, Germany, Luxembourg For coordination purposes: Austria
New bidding zone border: Belgium - Germany/Luxembourg (BE-DE/LU)	No change	No change	No change

The CCR CWE is based on the region "North-West Europe" as defined in point 3(2) of Annex 1 of Regulation (EC) No 714/2009. The proposed CCR CWE was extended to include Austria, due to the decision of the Pentalateral Energy Forum of 07.06.2013. In this Forum the concerned Ministries together with the EC have signed a declaration to extend the CWE region to Austria. This decision of the Pentalateral Energy Forum is taken into account when defining the CCR CWE and is seen as a further specification of the regions set in Regulation (EC) No 714/2009. Therefore, the CCRs Proposal provides that for coordination purposes and due to existing interdependencies Austrian Power Grid AG shall be also attributed to the CCR CWE. This actually fulfils what is requested in recital 7 of Regulation (EC) No 714/2009, which requires Member States to promote cooperation and monitor the effectiveness of the network at regional level so that cooperation at regional level is compatible with the progress towards a competitive and efficient internal market in electricity.

New Bidding Zones Border: In addition, it is foreseen that a new interconnection between Belgium and Luxembourg for bidding zone border BE-DE/LU will be in operation by 2016. This bidding zone border should upon its creation be part of the CCR CWE and therefore all NRA approval is sought already at this stage. The TSO Creos Luxembourg S.A. should therefore for coordination purposes and due to existing interdependencies also be attributed to the CWE CCR as from all regulatory authorities' approval.

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Specific stakeholders' comments - assessment

Stakeholders have asked for clarification on how the exclusion of Switzerland from the regional calculation at the southern border of Germany, the eastern border of France and the northern border of Italy will work with regional capacity calculation and allocation. CWE and Swiss TSOs have been working on the inclusion of these borders, at a first step with a standard hybrid coupling (fast interim) and, then, with a full integration within the flow based capacity calculation methodology. A technical solution can already be provided within a short timeline. However, as per the CACM Regulation Articles 1(4) and 1(5) (quoted below for clarity) these borders cannot be included into day-ahead market coupling until Switzerland signs an intergovernmental agreement with the European Union. TSOs are awaiting developments from the discussions between the involved parties.

> *CACM Article 1(4): "The Union single day-ahead and intraday coupling may be opened to market operators and TSOs operating in Switzerland on the condition that the national law in that country implements the main provisions of Union electricity market legislation and that there is an intergovernmental agreement on electricity cooperation between the Union and Switzerland."*
>
> *CACM Article 1(5): "Subject to the conditions in paragraph 4 above being fulfilled, participation by Switzerland in day-ahead coupling and single intraday coupling shall be decided by the Commission based on an opinion given by the Agency. The rights and responsibilities of Swiss NEMOs and TSOs joining single day-ahead coupling shall be consistent with the rights and responsibilities of NEMOs and TSOs operating in the Union to allow a smooth functioning of the single day-ahead and intraday coupling systems implemented at Union level and a level-playing field for all stakeholders."*

Stakeholders have also commented on the need to account for the level of interdependency of some bidding zone borders with CWE. As an example of this already in existence, the CWE flow based market coupling considers the interconnections between Great-Britain and Continental Europe (BRITNED and IFA) in parallel to the calculation of flow based parameters and integrates them into the equation (standard hybrid coupling). Further justification on the way these interdependencies will be taken into account has been requested. To this end, CWE and Channel TSOs are already working on improving and further integrating the process described above. At a later date, a merge of Channel with CWE or an eventual CWE-CEE may follow after this important groundwork. A direct inclusion of CCR Channel within CWE at this stage however would not provide a step-wise technically feasible approach and would not save time, since any further development also requires a parallel run. What is put forward in the CCRs Proposal, and the justification for which (as detailed in this explanatory document), represents the TSO's view of what level of progression is achievable today for these regions. All this is done without unduly jeopardising the correct functioning of the market or operational security, whilst providing for a step-wise approach for further improvement of capacity calculation that is technically achievable.

Figure 4: Bidding zones of the CCR CWE

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3.5. Capacity Calculation Region 4: Italy North

The CCR Italy North should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States mentioned in the table below.

Bidding zone borders	TSOs involved	Regulatory authorities involved	Member States involved
Italy NORD - France (NORD - FR) Italy NORD - Austria (NORD - AT) Italy NORD - Slovenia (NORD - SI)	TERNA Rete Elettrica Nazionale S.p.A., RTE–Réseau de transport d'électricité, Austrian Power Grid AG, ELES d.o.o.	Autorità per l'energia elettrica il gas e il sistema idrico, CRE, E-Control, Energy Agency	Italy, France, Austria, Slovenia

The CCR Italy North and the CCR GRIT described below under point 3.6 of this chapter have been defined by taking into consideration in particular:

- the region "Italy" as specified in point 3(2) of Annex I to Regulation (EC) No 714/2009 and involving Italy, France, Germany, Austria, Slovenia and Greece as well as the dynamic approach towards a competitive and efficient internal market in electricity; and
- specific provisions set in the CACM Regulation enhancing the promotion of such a competitive and efficient internal market in electricity, with particular reference to Articles 15 and 20.

In particular, the definition of these CCRs takes into account not only the bidding zone borders between the Member States involved in the region "Italy", as specified in point 3(2) of Annex I to Regulation (EC) No 714/2009, but also the borders between bidding zones inside Italy. This is because, while Annex I of Regulation (EC) No 714/2009 defines the regions where a common coordinated congestion-management method and procedure for the allocation of capacity between countries has to be implemented across countries, the CACM Regulation requires that the regions, to be defined for the purpose of capacity calculation, have to consist of a set of bidding zone borders that may not coincide with geographical borders between two countries, as is the case for Italian internal bidding zones.

Furthermore, Articles 15 and 20 of the CACM Regulation set the requirements for the definition of the CCRs and the development of the capacity calculation methodologies to be applied in the different CCRs as well as the deadlines for the development of the mentioned methodologies. Article 20 paragraph 1 of CACM Regulation stipulates that there must be one *common* capacity calculation methodology per CCR. As far as the region "Italy", as defined in point (c) of point 3.2 of Annex I to Regulation (EC) No 714/2009, is concerned, paragraph 3 of article 20 of CACM regulation requires the involved TSOs to submit a proposal for the development of a common coordinated capacity calculation methodology using a flow-based approach and clarifies that the proposal does not have to include bidding zone borders inside Italy and between Italy and Greece. To pave the way towards this mid-term goal, the CCR Italy North needs to be established now to set the basis for the future implementation of the CACM Regulation.

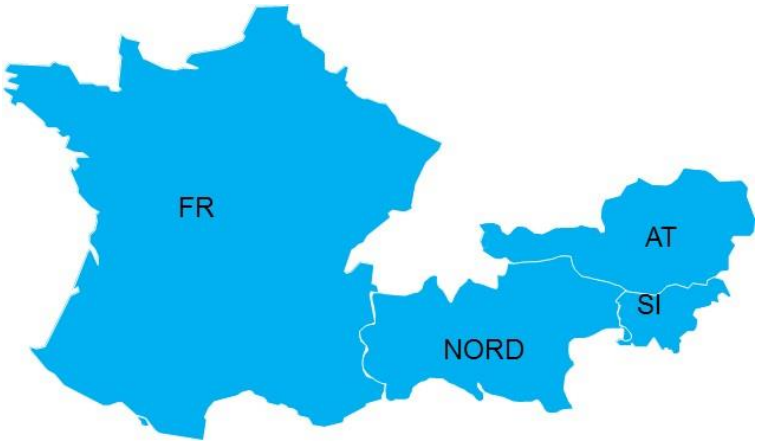
Finally, the CCRs Proposal supports the development of the capacity calculation methodology in accordance with the CACM Regulation. In particular, the distinct CCR Italy North allows for the evolution of CCRs and

should facilitate the involvement of Italy in CWE/CEE regions as soon as the development of the flow-based capacity calculation methodology evolves in the future in accordance with CACM Regulation.

Specific stakeholders' comments - assessment

One stakeholder asked for explanation why the France – Switzerland (FR-CH) bidding zone border is attributed to a CCR other than Italy North. Subject to the fulfilment of the legal requirements for the application of CACM Regulation in Switzerland in accordance to Article 1(4) and (5) of the CACM Regulation, the border FR-CH will be included together with the border CH-DE/LU in the CCR CWE due to the already coordinated capacity calculation on North Swiss borders. Additionally, the structure of production capacities in Switzerland and other CWE markets are complementary; base load production and intermittent renewable production as well as the flexible production offered by Swiss power plants can increase the efficiency of the system and their own value if used in a coordinated way within the same market and capacity calculation region.

Figure 5: Bidding zones of the CCR Italy North (AT-SI bidding zone border is not part of this CCR)



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3.6. Capacity Calculation Region 5: Greece-Italy (GRIT)

Following the description and justification given in section 3.5 about the definition of the CCR Italy North, the CCR GRIT consists of the bidding zone borders and involves the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone borders	TSOs involved	Regulatory authorities involved	Member States involved
Italy BRNN - Greece (BRNN - GR) Italy NORD - Italy CNOR (NORD - CNOR) Italy CNOR - Italy CSUD (CNOR - CSUD) Italy CNOR - Italy SARD (CNOR - SARD) Italy SARD - Italy CSUD (SARD - CSUD) Italy CSUD - Italy SUD (CSUD - SUD) Italy SUD - Italy BRNN (SUD - BRNN) Italy SUD - Italy FOGN (SUD - FOGN), Italy SUD - Italy ROSN (SUD - ROSN) Italy ROSN - Italy SICI (ROSN - SICI) Italy SICI - Italy PRGP (SICI - PRGP).	TERNA Rete Elettrica Nazionale S.p.A. and Independent Power Transmission Operator S.A.	Autorità per l'energia elettrica il gas e il sistema idrico, RAE	Italy, Greece

As far as the region "Italy", as defined in point (c) of point 3.2 of Annex I to Regulation (EC) No 714/2009, is concerned, paragraph 3 of article 20 of CACM Regulation clarifies that, with reference to the bidding zone borders inside Italy and between Italy and Greece, the involved TSOs are not required to submit a proposal for the development of a common coordinated capacity calculation methodology using a flow-based approach. This requirement instead applies to the Italian northern borders (i.e. CCR Italy North). This is one of the reasons why bidding zone borders inside Italy and between Italy and Greece are not included in the CCR Italy North.

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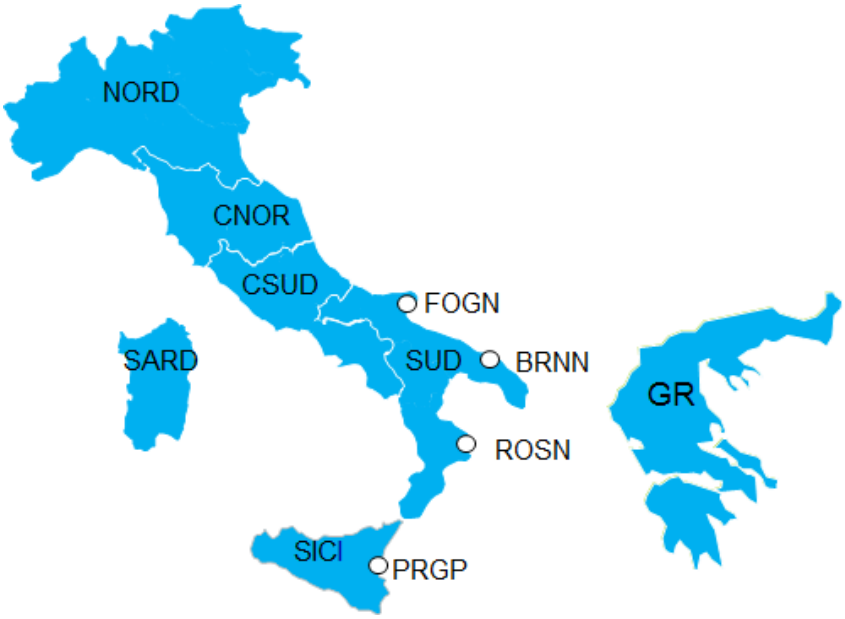
In addition, it should be considered that, differently from the Italian northern borders which are meshed with the rest of the European grid, Italian internal bidding zones have basically a radial configuration; thus, the main advantage of flow-based allocation, i.e. taking into account that power flows over different paths, is not applicable to this CCR. As a result, the potential inclusion of the Italian internal bidding zones in a flow based region has to be preliminary and carefully assessed in order to make sure they do not limit cross-border capacities in the flow based region.

Finally, the border between Italy and Greece is an HVDC link so it is not meshed at all with the rest of the European grid.

The internal Italian bidding zones configuration includes also the virtual bidding zones of Malta, Corsica and Corsica AC. The borders connecting these bidding zones are not included in the CCR GRIT and, thus, are not listed in the table above or shown on the map below. This is because Terna is the only certified TSO bound by the CACM Regulation operating on one side of these bidding zones' borders. Furthermore, considering that an electricity market is not in place in these virtual bidding zones, they have been created for the sole purpose of monitoring the energy consumption schedules in these bidding zones that need to be imported from the adjacent geographical Italian bidding zones. In this respect, the above-mentioned virtual bidding zones are considered in the management of the Italian electricity market only.

Figure 6: Bidding zones of the CCR GRIT



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3.7. Capacity Calculation Region 6: Central Eastern Europe (CEE)

The CCR CEE should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	Regulatory authorities involved	Member States involved
Germany/Luxembourg - Poland (DE/LU - PL) Germany/Luxembourg - Czech Republic (DE/LU - CZ), Austria - Czech Republic (AT - CZ) Austria - Hungary (AT - HU) Austria - Slovenia (AT - SI) Czech Republic - Slovakia (CZ - SK) Czech Republic - Poland (CZ - PL) Hungary - Slovakia (HU - SK) Poland - Slovakia (PL – SK) Croatia - Slovenia (HR - SI) Croatia - Hungary (HR - HU) Romania - Hungary (RO - HU) Germany/Luxembourg - Austria (DE/LU - AT)	50Hertz Transmission GmbH and PSE S.A., TenneT TSO GmbH, ČEPS, a.s., Austrian Power Grid AG, MAVIR Hungarian Independent Transmission Operator Company Ltd., ELES, d.o.o., Slovenská elektrizačná prenosová sústava, a.s, Croatian Transmission System Operator Ltd. (HOPS d.o.o.), Compania Naţională de Transport al Energiei Electrice "Transelectrica", TransnetBW GmbH, and Amprion GmbH.	BNetzA, URE, ERÚ, E-Control, MEKH, Energy Agency, RONI, HERA, ANRE	Germany, Poland, Czech Republic, Austria, Hungary, Slovenia, Slovakia, Croatia, Romania
New bidding zone border: Hungary - Slovenia (HU-SI)	No change	No change	No change

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The CCR CEE includes, without any changes, as specified in point 3.2(d) of Annex I to Regulation (EC) No 714/2009, the bidding zone borders of Germany, Poland, Czech Republic, Slovakia, Hungary, Austria and Slovenia. TSOs on these bidding zone borders aim at introducing the flow-based capacity calculation methodology as soon as possible. The CCR CEE includes also the bidding zone borders of Croatia - Slovenia, Croatia - Hungary and Romania - Hungary.

Specific stakeholders' comments - assessment

Regarding the Germany - Austria (DE-AT) bidding zone border two responses were received. The first stakeholder requested to acknowledge the DE-AT border and to attribute the DE-AT border into the CCR CEE. The second stakeholder requested to take due account of the ACER's Opinion No 09/2015 but nevertheless stressed the non-binding nature of this opinion asking to make changes in the bidding zone configuration only as result of bidding zone review process. TSOs taking duly into account these comments as well as the considerations presented in Chapter 5 of this explanatory document decided to include this bidding zone border in the CCR CEE. At the same time TSOs acknowledge that the inclusion of this border does not influence the implementation of capacity allocation on this border, which will be introduced in line with the implementation calendar agreed upon by the relevant regulatory authorities and TSOs in accordance with the ACER Opinion No 09/2015 and at the latest when implementation of flow-based capacity calculation takes places in the CCR CEE in accordance with the CACM Regulation.

Regarding the inclusion of the Croatia - Slovenia, Croatia - Hungary and Romania - Hungary borders since the beginning in CEE the more repeated stakeholders' comment during the public consultation (mostly from Romanian stakeholders) supported the inclusion of the Romania - Hungary bidding zone border since the beginning in the CEE region. For topological and consistency reasons, the CCRs Proposal provides that the bidding zone borders of Croatia - Slovenia, Croatia - Hungary and Romania - Hungary shall belong to the same CCR. In order to accommodate stakeholder's feedback, the CCRs Proposal includes now these three biding zone borders since the beginning in the CEE Region. It shall be noted, that the implementation of methodologies and projects may differ within the CCR for various borders, in order to not endanger the ongoing initiatives.

New Bidding Zones Borders: in addition, it is foreseen that a new bidding zone border, i.e., the Hungary - Slovenia (HU-SI) bidding zone border indicated in the table above, will be created before the end of 2018. This bidding zone border should upon its creation be part of the CCR CEE based on point 3.2(d) of Annex I to Regulation (EC) No 714/2009. Therefore, an NRA approval is being sought already.

Figure 7: Bidding zones of the CCR CEE

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

The CCR SWE should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone borders	TSOs involved	Regulatory authorities involved	Member States involved
France - Spain (FR - ES) Spain - Portugal (ES - PT)	RTE - Réseau de transport d'électricité, REE - Red Eléctrica de España, S.A.U., REN - Rede Eléctrica Nacional, S.A..	CRE, CNMC, ERSE	France, Spain, Portugal

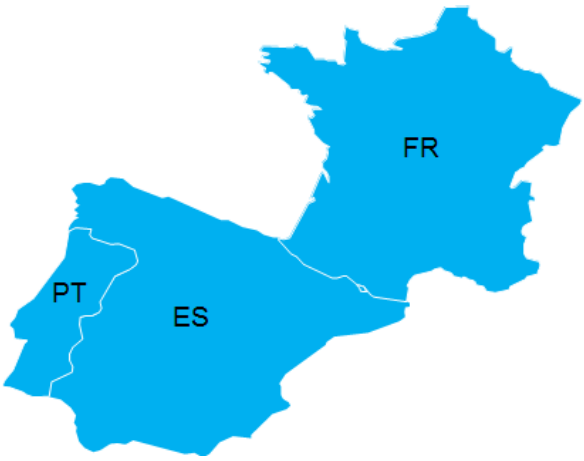
The CCR SWE is configured as specified in point 3(2)(e) of Annex I to Regulation (EC) No 714/2009, including the bidding zone borders of France, Portugal and Spain.

Specific stakeholders' comments - assessment

A respondent comments that the geographical coverage of the calculus must be extended to improve its efficiency. The respondent will support the integration of the Iberian Operators in a more extended area of calculation, beyond the classical South West Region "FR+ES+PT". This alternative solution will create a greater attractiveness for investors. New solutions for trade will be facilitated, promoting an efficient integration of RES and their deployment where actually they are more cost-effective.

The TSOs consider that including SWE in the CWE capacity calculation process will not improve its efficiency as, in spite of the new HVDC link, the Iberian Peninsula remains very weakly interconnected with France and the rest of the CWE electricity system. The CACM Regulation foresees a periodic revision of the current CCR configuration, taking into account the new reinforcements of the interconnections and developments in the capacity calculation methodologies.

Figure 8: Bidding zones of the CCR SWE



3.9. Capacity Calculation Region 8: Ireland and United Kingdom (IU)

The CCR IU should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	regulatory authorities involved	Member States involved
SEM* - Great Britain (SEM – GB)	EirGrid, Moyle Interconnector (Moyle), National Grid Electricity Transmission plc (NGET) and SONI	Ofgem, UR, CER	Ireland, United Kingdom

*SEM = Single Energy Market in Ireland and Northern Ireland

The CCR IU and the CCR Channel described under points 3.9 and 3.10 are based on the region "UK, Ireland and France" as defined in point 3(2) of Annex 1 of Regulation (EC) No 714/2009 (hereafter referred to as "Channel region"). As outlined in Article 3 of the CACM Regulation, this regulation aims at; "b) *ensuring optimal use of the transmission infrastructure"* and at "d) *optimising the calculation and allocation of cross-zonal capacity*". It is understood that the proposal on CCRs plays a large role in supporting these aims and should do so while ensuring operational security (point c). It is noted that some operational security issues seen on smaller synchronous areas are not experienced within larger synchronous areas. For instance, National Grid Electricity Transmission (NGET) manages low inertia and ROCOF (Rate of Change of Frequency) risks not seen on continental Europe. These risks can and do affect cross border exchanges to Great Britain (GB).

The operational evidence demonstrates that the flows on both interconnections between GB and Continental Europe (IFA and BritNed – hereafter referred to as "GB-CE interconnections") interact significantly on the GB network in a combined manner. This indicates that these two interconnections should be within the same CCR. It is expected that a similar level of interaction will be seen for future interconnections with connection sites on the south coast of the United Kingdom, and hence, these future interconnections should be included within the same CCR in order to achieve the aims of general objectives; points a) & g) of Article 3 of the CACM Regulation. The same will apply to future interconnections that will be operational in the longer term (beyond 2018) creating new bidding zone borders and will be operated by legal entities to be certified as TSOs. Such future bidding zone borders expected to be operational within the implementation timescales of the CACM guideline are included in annex 2 to this explanatory document for information.

On the other hand, the interconnections on the bidding zone border between GB and the Single Electricity Market in Ireland and Northern Ireland (hereafter referred to as "SEM-GB") do not demonstrate a significant interaction with the interconnections on the GB network to CE. Primarily this is for 3 reasons; the SEM-GB interconnections are electrically very distant on the GB network from the GB-CE interconnections and so do not experience the same constraints. Secondly; the issues that affect capacity on the GB-CE interconnections are very localised on either side of the English Channel due to their proximity to other generation and demand sources, meanwhile the SEM-GB interconnections are never affected in this same way. Accordingly, the main factors to affect the capacity of SEM-GB interconnections are also very localised to their point of connection on the GB and SEM networks respectively and are materially different in nature to those mentioned above. Finally, both the individual (nodal) and combined capacity of the SEM-GB

interconnections compared to the GB-CE ones is small (an effect that will be further compounded by future planned interconnections) and so national GB network constraints can affect the CE interconnection's capacity but not that of the SEM interconnections. It is therefore proposed that the SEM-GB-bidding zone border should form a distinct CCR. Moreover, in addition to these reasons, Article 20 paragraph 1 of CACM Regulation stipulates that there must be one *common* Capacity Calculation Methodology per CCR. A methodology that is common to both the SEM-GB bidding zone border and the GB-FR, GB-NL and GB-BE bidding zone borders may have difficulty fully achieving required efficiency in the near term given the unique challenges associated with operating the comparatively small synchronous system of SEM, which is not connected to the highly meshed AC network in continental Europe. Namely, the ratio of interconnection capacity to total system demand in SEM is high, as is the proportion of wind generation. These factors combined present difficulties in terms of system stability that pose a threat to the operational security (art.3 c) of CACM objectives) and to be effectively managed should be addressed in the capacity calculation methodology for the SEM-GB biding zone border. These issues are not likely to be as acute on other borders within the Channel region as defined in point 3.2 of Annex I to Regulation 714/2009.

Furthermore, the SEM is currently undergoing significant changes to ensure it is compliant with the European Network Codes/Guidelines and has received a derogation in CACM Regulation until December 31st of 2017 as per Article 83(1) (cited below), in acknowledgement of the unique challenges involved. Given the levels of risk and uncertainty associated with the implementation of the new arrangements, it would be advisable to treat the SEM-GB bidding zone border separately before attempting deeper integration with the rest of the Channel region.

> *CACM Article 83(1) Transitional Provisions for Ireland and Northern Ireland: "Except for Articles 4, 5 and 6 and participation in the development of terms and conditions or methodologies, for which the respective deadlines shall apply, the requirements of this Regulation shall not apply in Ireland and Northern Ireland until December 31st 2017".*

Finally, this proposal supports various possibilities for capacity calculation methodologies to ensure efficiency in capacity calculation. In particular, the distinct CCR IU allows for the evolution of Capacity Calculation Regions and should facilitate GB involvement in CWE/CEE regions as the level of interconnection increases in the future from United Kingdom to Continental Europe. Therefore, the determination of the CCRs as proposed herein under points 3.9 and 3.10 is deemed necessary. In light of these challenges and opportunities the proposal of CCR IU and CCR Channel both separately, and taken as a whole, represent a progressive step forward from the current bi-lateral arrangements whilst providing a technically feasible step-wise approach towards achieving greater harmonisation. This will be done in a progressive and orderly manner as describe in Annex 3 providing a process for integration.

Figure 9: Bidding zones of the CCR IU

3.10. Capacity Calculation Region 9: Channel

The CCR Chanel should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	Regulatory authorities involved	Member States involved
France - Great Britain (FR - GB) Netherlands - Great Britain (NL - GB)	RTE - Réseau de transport d'électricité, National Grid Electricity Transmission plc (NGET), National Grid Interconnectors Limited (NGIC), BritNed Development Limited (BritNed), TenneT TSO B.V.	CRE, Ofgem, ACM	France, United Kingdom, Netherlands

Bearing in mind the explanation about the definition of the CCR IU and the CCR Channel above in point 3.9, the CCR Channel should consist of the bidding zone borders, and involve the TSOs/regulatory authorities/Member States, as detailed in the CCRs Proposal.

There is operational evidence that the flows on both IFA and BritNed interconnections do interact on the GB network in a combined manner. This implies that these two interconnections should be within the same CCR. It is expected that a similar level of interaction will be seen for future interconnections with connection sites on the South coast of the United Kingdom, and hence these future interconnections should also be included within the same CCR. To help quantify the typical interactions between the different bidding zone borders, National Grid analysed the operational security advice given to the National Grid control room at Day Ahead. For reference a period of 242 days, this aspect was studied.

National Grid maintains the security and quality of supply standards on the GB network by considering the flows across boundaries in the GB network. At the Day Ahead stage key boundaries are identified and security limits derived. These bottlenecks on the system are termed constraints and can originate from thermal, voltage, fault level, stability or response issues. The identification of a constraint at Day Ahead does not necessarily mean a congestion issue on the actual day, as many factors can change. However, it has been assumed that the frequency that which constraints are identified is indicative of the typical bottlenecks on the system.

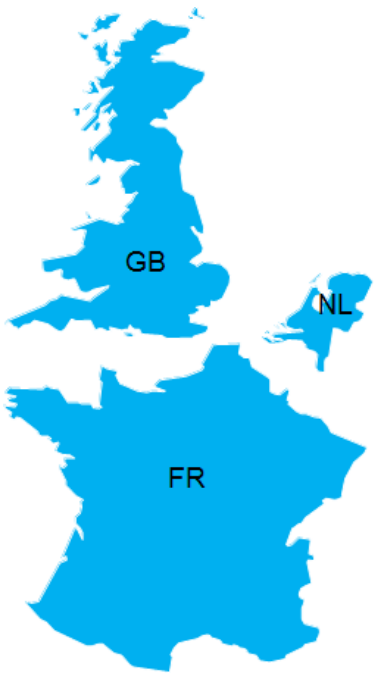
On average 11 key constraints were identified each day, this ranged from a minimum of 4 to a maximum of 23. In total 2750 constraints were identified within this period. Of this total statistical sample the ones that were judged to be strongly affected by IFA or BritNed were examined as a sub-sample. The vast majority of this subset, 87% (468), involved both IFA and BritNed. Conversely only 13% (73) involved only one and not the other. This has been taken as evidence that the flows on both IFA and BritNed do interact on the GB network in a combined manner. As such the Channel position is that these two cables should be within the same CCR. It is technically expected that a similar level of interaction will be seen for future interconnectors

with connection sites on the South coast of the United Kingdom, and hence these should also be included within the same CCR.

In contrast this this, the GB-SEM interconnectors do not demonstrate a significant interaction with the interconnections on the South coast of the GB network to CE, therefore it is proposed that the GB-SEM border should form a distinct CCR, as detailed in the section above; 3.9.

In the near term coordination of these proposed CCRs will be ensured in a variety of activities; through strengthened inter-TSO collaboration through the provision of the Common Grid Model (CGM), the still to be appointed capacity calculator(s), ongoing and strengthened roles of Regional Security Coordination Service providers (RSCSPs) as detailed in ENTSO-E's forthcoming multilateral agreement, as well as continued involvement in the ongoing wider implementation projects focused on harmonising the DA and ID markets. Additionally the implementation of these regions is being done under a shared governance to ensure consistency. This will also allow for continual assessment of these regions as the bidding zones evolve internally and as the level of interconnection to other CCRs increase. If at such a point in time it is then deemed necessary to re-evaluate the appropriateness of merging the regions, then the current arrangement of CCRs in this proposal will allow for such a transition and will have been an important first step in achieving this.

Figure 10: Bidding zones of the CCR Channel



3.11. Capacity Calculation Region 10: Baltic

The CCR Baltic should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	Regulatory authorities involved	Member States involved
Estonia - Latvia (EE - LV) Latvia - Lithuania (LV - LT) Estonia - Finland (EE - FI)	Elering AS, Augstsprieguma tīkls, Litgrid AB, Fingrid Oyj,	ECA, PUC, NCC, Energy Authority	Estonia, Latvia, Lithuania, Finland
New bidding zone borders: Lithuania - Sweden 4 (LT-SE4) Lithuania - Poland (LT-PL)	Svenska kraftnät, PSE S.A.	EI, URE	Sweden, Poland

The CCR Baltic includes the Baltic interconnections between the Baltic Member States and Finland, Sweden and Poland, which are governed by the CACM Regulation provisions. The CCR Baltic is in line with point 3.2 of Annex I of Regulation 714/2009 since it covers all the countries listed therein, i.e., Estonia, Latvia and Lithuania. In addition, other countries, i.e., Sweden, Finland and Poland, are included because of the current or new bidding zone borders described below that connect the Baltic with these countries. These are the bidding zone border between Estonia and Finland, the bidding zone border between Lithuania and Sweden and the bidding zone border between Lithuania and Poland.

It is noted that the power systems of the Baltic States (Estonia, Latvia and Lithuania) operate synchronously with the power systems of Russia and Belarus and are not synchronously connected with any other system in the EU. Baltic States have borders and calculate and offer cross-border capacities to the market with the third countries, Russia and Belarus. Given that Russia and Belarus are not EU members and thus are not bound by the CACM Regulation and other electricity-related EU regulations and/or legislative acts, these Baltic borders connected with Russia and Belarus operate under a different legislative system than the EU and are not subject to CACM Regulation. Nevertheless, borders and power flows with the third countries influence internal Baltic cross-zonal capacities. Interrelation and governance of Baltic and third countries capacities should be discussed at the later stage inside CCR Baltic based on the CACM Regulation provisions and following regulatory authorities' acceptance of respective governance rules.

New Bidding Zones Borders: In addition, it is foreseen that new bidding zone borders, i.e., Lithuania - Sweden 4 (LT-SE4), Lithuania - Poland (LT PL) indicated in the table above, will be created before the end of 2018. These bidding zone borders should upon their creation be part of the CCR Baltic; therefore, all regulatory authorities' approval is being sought already.

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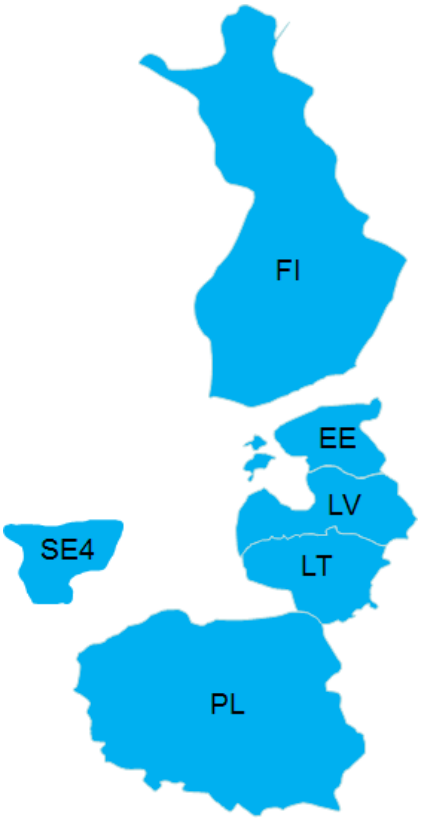
Current DC interconnections Estlink1 and Estlink2 between Estonia and Finland (referred to as EE-FI bidding zone border) connect Baltic States to the Nordic region. The DC interconnection NordBalt will connect Lithuania and Sweden in the future (referred to as the LT-SE4 bidding zone border). The upcoming AC interconnection with the back-to-back converter LitPol Link between Lithuania and Poland (referred to as the LT-PL bidding zone border) will connect Baltic States to CEE region.

The EE-FI bidding zone border and LT-SE4 bidding zone border (after NordBalt commissioning at the end of year 2015) are to be included in the CCR Baltic because of their significant influence on the market of the region, capacity calculation procedures, common Baltic and Nordic balancing market and operational processes. The LT-PL bidding zone border (after LitPol Link commissioning at the end of year 2015) is to be included in the CCR Baltic because of its significant influence to the market of the region, capacity calculation procedures and operational processes.

Figure 11: Bidding zones of the CCR Baltic (SE4-PL bidding zone border is not part of this CCR)



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3.12. Capacity Calculation Region 11: South-east Europe (SEE)

The CCR SEE should consist of the bidding zone borders and involve the TSOs/regulatory authorities/Member States delineated in the table below.

Bidding zone border	TSOs involved	Regulatory authorities involved	Member States involved
Greece - Bulgaria (GR - BG) Bulgaria - Romania (BG - RO)	Independent Power Transmission Operator S.A., Elektroenergien Sistemen Operator (ESO) EAD, Compania Naţională de Transport al Energiei Electrice "Transelectrica" S.A.	RAE, SEWRC, ANRE	Greece, Bulgaria, Romania

Figure 12: Bidding zones of the CCR SEE

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4. The assessment of the stakeholders' comments

4.1. Introduction

According to the CACM Regulation, the deadline for the development and submission of the CCRs Proposal is three months after its entry into force. In line with the CACM Regulation a public consultation was organised lasting one month from 24 August 2015 till 24 September 2015. Through this public consultation each interested party has been able to submit comments on a draft CCRs Proposal. In the middle of the public consultation (14 September 2015), ENTSO-E organised a public workshop where the participants received general information on the draft CCRs Proposal which intended to allow participants to provide their comments and ask questions. During the public consultation comments from 17 different respondents were received that have been duly considered by TSOs. This document includes all of these comments in the table of Annex 4, while this chapter describes how these comments have been assessed and how the relevant parts of the CCRs Proposal have been adjusted where appropriate. Furthermore, it includes a summary of all comments received extracted from Annex 4.

The references made in this chapter correspond to the draft CCRs Proposal in its version of 24 August 2015 published for consultation.

4.2. Summary of the assessment of stakeholders' comments

In this chapter, general comments related to the draft CCRs proposal are addressed. CCR specific comments are addressed in the previous sections dedicated to each CCR.

a) Alternatives and impact assessment

Respondents requested alternatives and an impact assessment to be included in the CCRs Proposal. TSOs confirm that the draft CCRs Proposal published for consultation was based generally on existing practices for coordination in capacity calculation with some changes foreseen in the near future reflecting the interdependencies between borders found out by practical experience in capacity calculation. It is stressed that this draft CCRs Proposal is a starting point for future development. The approach selected was due to the short time span to develop the proposal (three months after the entry into force of the CACM Regulation including a one month consultation period) and detailed impact assessment with proper selection criteria development was not feasible. Some respondents even requested TSOs to start from the existing situation, with existing entities, rather than entering into future discussions. TSOs would like to underline that the Article 31 of the CACM Regulation obliges ENTSO-E to prepare a biennial report on capacity calculation and allocation, where indicators for assessing the longer term efficiency of market coupling including the merging of CCRs have to be developed. This implies that TSOs shall develop indicators (criteria) in order to evaluate the efficiency of the current CCR configuration.

The proposal itself cannot, based on CACM Regulation, include several alternatives but one robust CCR configuration. During the preparatory work TSOs discussed several alternatives, but the draft CCRs Proposal for consultation included only the draft proposal based on the major criterion of the experienced interdependencies between bidding zone borders in capacity calculation.

This explanatory document gives justifications under each CCR description in Chapter 3, why TSOs have decided to split some regions defined in Annex I of Regulation 714/2009, i.e. Northern region, Channel and Italy, into two CCRs.

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b) CCRs amendment procedure

The process for future amendments of CCRs is defined in Article 9(13) of CACM Regulation, which entitles TSOs and all regulatory authorities to request amendments of the CCRs Proposal. Such amendment shall be submitted to all regulatory authorities following the same process of the development of the initial proposal in accordance with Article 15 of the CACM Regulation and before submission consulted in accordance with Article 12 of the CACM Regulation. Article 12 in particular obliges TSOs to publish any proposals, including amendment proposals, for consultation before the proposal is submitted for all regulatory authorities' approval. Stakeholders will thus be involved in such an amendment process in accordance with Article 12 of CACM Regulation.

TSOs see this proposal as a starting point, and in the future, there will be amendments to this CCR configuration due to e.g. changes in bidding zones, new borders due to new interconnections, efficiency analyses made for the biennial report on capacity calculation and allocation or mergers of CCRs.

This CCRs Proposal covers new bidding zone borders foreseen to be created until 2018. New bidding zone borders after this are not included in the CCRs Proposal as it is anticipated that there will be a need for an amendment of the CCRs Proposal at the latest in 2018 due to foreseen developments in the IEM. It is presently not possible to specify an exact date for such a re-evaluation as it depends on the triggering events for amendments as mentioned above.

c) Role of ENTSO-E and TSOs

The CCRs Proposal based on the CACM Regulation are developed and submitted by TSOs. ENTSO-E serves as a facilitator for this TSOs work. TSOs have agreed to cooperate through ENTSO-E for this purpose. It is noted, that although consultations and workshops are managed by ENTSO-E, decisions on proposals submitted to all regulatory authorities' approval are taken by TSOs in accordance with the CACM Regulation, where requested to do so.

d) Coordinated Capacity Calculator

Each CCR is required to have a coordinated capacity calculator (CCC) in accordance with Article 27(2) of CACM Regulation. This CCC shall be established four months after all regulatory authorities have made a decision on the capacity calculation methodology. This means that firstly the CCR configuration has to be decided, followed by the development of the capacity calculation methodology and, finally, the CCC shall be set to calculate capacities in a coordinated way. CCRs have to be defined first and this fundamental decision will lead to the establishment of CCCs. TSOs point out that ENTSO-E has published a position paper[2], where capacity calculation is one of the tasks assigned to the regional security coordination initiatives (RSCIs) implying that an RSCI may act as a CCC.

According to the CACM Regulation the CCC will execute the capacity calculation in the future; thus, there is no basis for justifying the comments by some respondents that TSOs will still calculate capacities on an individual basis when the requirements mentioned above are fulfilled.

e) Vision on target regions and roadmap for longer term CCRs configuration

Stakeholders requested fewer regions and would like to see a roadmap for achieving this. TSOs took these comments into account and prepared Annex 3 to this explanatory note which presents an initial estimation of TSOs on how they see the CCRs development and possible merging order. TSOs would

[2] ENTSO- E position paper on Future TSO Coordination for Europe Policy, dated 20 November 2014: https://www.entsoe.eu/publications/position-papers/position-papers-archive/Pages/Position%20Papers/Future-TSO-coordination-for-Europe-Policy-Paper.aspx.

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like to emphasise that this roadmap is an indication of possible mergers, implying that detailed efficiency studies between alternative paths have to be made before any proposal for merging specific CCRs will be made.

The timeframe for the current CCRs Proposal submitted to all regulatory authorities is short- or medium-term.

f) Non-EU countries

The legal conditions for the inclusion of non-EU bidding zone borders and how TSOs foresee the involvement of the non EU TSOs in the CCRs work are presented in Annex 1 to this explanatory document.

g) Cooperation between CCRs

TSOs underscore that Article 29(9) of the CACM Regulation obliges each CCC to cooperate with the neighbouring CCCs by exchanging and confirming information on interdependency with the relevant CCCs. Furthermore, an assessment of the accuracy of the information and corrective measures shall be included in the biennial report to be prepared by ENTSO-E in accordance with Article 31 of CACM Regulation.

h) Dates for TSOs submission and all regulatory authorities' approval

According to the CACM Regulation TSOs have to submit the CCRs proposal by 13 November. All regulatory authorities have to approve or request amendments to the CCRs proposal within six months after the last NRA has received the CCRs Proposal. In case amendments are requested, TSOs have to respond to this request within two months and afterwards all regulatory authorities to approve the amended CCRs Proposal within two months.

Based on the approved CCRs configuration, TSOs will develop the terms and conditions or methodologies required and implement regional measures and processes in accordance with the CACM Regulation. These implementation deadlines for each proposed methodology or the proposed terms and conditions will be included in the TSOs proposals submitted to NRA approval at a later stage, i.e. by deadlines defined in the CACM Regulation.

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5. Special considerations regarding the Germany/Luxembourg-Austria bidding zone border

In the CCRs Proposal presented for public consultation, the Germany/Luxembourg - Austria (DE/LU-AT) border has not been tackled, and the following footnote has been included: "*An opinion on the border between Germany-Austria is expected in the near future from ACER following a request by the Polish Regulatory Authority to ACER to assess the compliance of the congestion management rules on the Germany-Austria border with existing European Regulation*".

The ACER Opinion No 09/2015 (hereafter referred to as "the ACER Opinion") has been published the 23 September 2015 and the updated CCRs Proposal takes it into account. This ACER Opinion states inter alia:

"The Agency invites:

(a) the TSOs and NRAs of the CEE region:

(i) To commit, within 4 months of the date in which this Opinion is adopted and published, to the adoption of a coordinated capacity allocation procedure on the DE-AT border, with a realistic but ambitious implementation calendar with concrete steps. This implementation calendar should give TSOs and market participants a reasonable amount of time to prepare themselves for this important change.

(ii) To allocate maximum resources and efforts to the implementation of Flow-Based Market Coupling in the CEE region as early as possible and work together constructively to avoid any further delays or disputes.

(iii) To evaluate, within 4 months of the date in which this Opinion is adopted and published, whether the already implemented interim measures (e.g. the virtual phase shifter in place since February 2014) are sufficient to ensure network security, or whether additional interim measures coordinated at regional level would be necessary to ensure that the network is operated safely until a coordinated capacity allocation procedure on the DE-AT border is implemented.

(b) The German and Austrian TSOs and NRAs to evaluate the need for potential transitory regulatory measures for market participants to accompany the implementation of a coordinated capacity allocation procedure on the DE-AT border.

(c) All relevant NRAs to continue supporting the market integration process during the transitional period until a coordinated allocation procedure on the DE-AT border is implemented. This support may imply approving CEE congestion management rules which are not fully compliant with the Regulation (EC) 714/2009 and its Annex until the measure recommended above becomes effective."

While following the ACER Opinion on the assignment of the Germany/Luxembourg - Austria border to the CEE Region, it has to be ensured that the inclusion of this border does not influence the implementation of capacity allocation on this border. Thus, the CCRs Proposal clarifies that such capacity allocation will be introduced in line with the implementation calendar agreed upon by the relevant regulatory authorities and TSOs in accordance with the ACER Opinion No 09/2015 and at the latest when implementation of flow-based capacity calculation takes places in the CCR CEE in accordance with the CACM Regulation. The CCRs Proposal also clarifies that any reference to the bidding zones of Germany/Luxembourg (DE/LU) or Austria (AT) for the definition of the bidding zone borders in the CCRs Proposal should also be read as the bidding zone of Germany/Austria/Luxembourg (DE/AT/LU) for the purposes of capacity allocation on the affected bidding zone borders until the requirements described in Article 8(3) of this CCRs Proposal are fulfilled.

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6. Special considerations regarding the CWE- CEE cooperation initiative

As the way to ensure smoother and faster integration of the CCRs CWE and CEE towards the implementation of common flow-based capacity calculation methodology in Central Europe, a common project involving CWE and CEE TSOs as described in the CCRs Proposal will start as soon as the CCRs Proposal will be submitted to all regulatory authorities. The aim of this common project is facilitating the merging of CCRs CWE and CEE in an effective way while taking into account the already achieved results and ongoing projects.

The first deliverable of this project will be the roadmap for the merging of CWE and CEE, which should take place as soon as possible and before the deadlines provided by the CACM Regulation. The deadline for the submission of this roadmap to the relevant regulatory authorities and ACER will be four months after the submission of the CCRs Proposal by TSOs, i.e. before all regulatory authorities' deadline for the approval of the CCRs Proposal expires.

The second deliverable will be a joint concept to merge the CCRs CWE and CEE provided that the implementation of a flow-based day ahead process within CCR CEE, coordinated with CCR CWE, has taken place, having CWE methodology as a starting point. The CWE approach will be amended where necessary (e.g. to cover the different grid structures of CCRs CEE and CWE) and the merging might be executed stepwise if needed.

The common project will also include a Memorandum of Understanding (MoU) between all involved CWE and CEE TSOs outlining the precise scope of the integration and the organizational structure of the cooperation, which will involve CWE and CEE TSOs as well as ENTSO-E as facilitating party. In addition to define the organisational structure, the aim of the MoU will be to intensify the exchange of methods, concepts and IT solutions for the day ahead taking into account the operational reality of the CWE flow based methodology and processes, and in a successive step, an exchange of methodological approaches for the intraday timeframe and other CACM Regulation obligations.

TSOs and ENTSO-E support this cooperation initiative and ask ACER, the EC and the involved regulatory authorities to support this common project also.

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ANNEX 1 – Future composition of CCRs including various non-EU bidding zone borders

1. Introduction

Annex 1 (Future composition of CCRs including various non-EU bidding zone borders) is attached to the explanatory document of the CCRs Proposal for informational purposes. The composition of the CCRs presented in this Annex reflects the interdependencies between EU and non-EU bidding zones borders as well as cooperation between some non-EU and EU TSOs. It establishes the basis for the future implementation of the CACM Regulation by non-EU TSOs/non-EU regulatory authorities. For the avoidance of doubt, such CCR composition can only take legal effect when the legal conditions for the integration of the CACM Regulation are fulfilled in the non-EU countries, e.g. when the CACM Regulation becomes an effective law within the legal framework of each of these countries and respective NRA approvals take place as required at that point. TSOs expect that these legal conditions will have been fulfilled in some non-EU countries by the time the capacity calculation methodologies developed by the CCRs are approved by all regulatory authorities of each capacity calculation region (i.e. at the latest 25 months after the entry into force of the CACM Regulation). Thus, to facilitate the implementation by non-EU TSOs and the cooperation of the EU and non-EU regulatory authorities at an early stage, within the legal boundaries set by EU or national laws, the involved TSOs (EU and non-EU) will start working together based on the CCR composition presented in Annex 1 to achieve the targets set in the CACM Regulation and promote the completion and efficient functioning of internal market and ensure the optimal management, coordinated operation and sound technical development of the electricity transmission system in Europe. For these reasons, Annex 1 is published and will be submitted by TSOs to all affected regulatory authorities for their information or eventual approval in cases in which non-EU regulatory authorities have this competence based on EU and national law ensuring compliance with CACM Regulation at the time of the submission of the CCRs Proposal by EU TSOs to all EU regulatory authorities.

The Annex includes all CCRs, including those that will change due to the inclusion of non-EU bidding zone borders. The unaffected CCRs described in Chapter 3 of this explanatory document are repeated to provide the entire picture of the CCRs. Furthermore, this Annex includes new bidding zone borders expected to be in place in the year 2018 due to new interconnections that will be built between the relevant EU Member States and non-EU countries.

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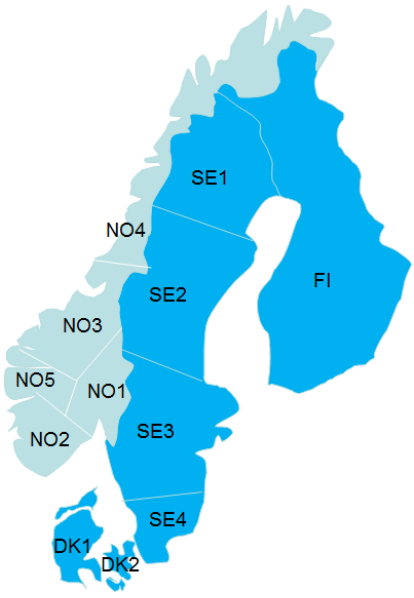
2. Capacity Calculation Regions

Capacity Calculation Region 1: Nordic including non-EU bidding zone borders

Bidding zone borders	TSOs involved	Countries involved
DK1-SE3, DK2-SE4, DK1-DK2, SE4-SE3, SE3-SE2, SE2-SE1, SE3-FI, SE1-FI, Denmark 1 – Norway 2 (DK1-NO2)*, Sweden 3 – Norway 1 (SE3-NO1)*, Sweden 2 –Norway 3 (SE2-NO3)*, Sweden 2-Norway 4 (SE2-NO4)*, Sweden 1 – Norway 4 (SE1-NO4)*, Norway 3 – Norway 4 (NO3-NO4)*, Norway 1 – Norway 3 (NO1-NO3)*, Norway 1 – Norway 5 (NO1-NO5)*, Norway 1 – Norway 2 (NO1-NO2)*, Norway 2 – Norway 5 (NO2-NO5)*	Energinet.dk, Svenska kraftnät, Fingrid Oyj, Statnett SF*	Denmark, Sweden, Finland, Norway*

*These bidding zone borders will be included in the CCR Nordic in the future, subject to the fulfilment of the legal requirements for the application of CACM Regulation in Norway.

Figure A1: Bidding zones of the CCR Nordic



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Capacity Calculation Region 2: Hansa including non-EU bidding zone borders

Bidding zone borders	TSOs involved	Countries involved
DK1-DE/LU, DK2-DE/LU, SE4 - PL, Norway 2 – Netherlands (NO2-NL)*	Energinet.dk, TenneT TSO GmbH, 50Hertz Transmission GmbH, Svenska kraftnät, PSE S.A., Statnett SF*, Tennet TSO B.V.*	Denmark, Germany , Sweden, Poland, Norway*, Netherlands*

*These bidding zone borders will be included in the CCR Hansa in the future, subject to the fulfillment of the legal requirements for the application of CACM Regulation.

2. Figure A2: Bidding zones of the CCR Hansa (PL-DE/LU, DK2-SE4, DK1-DK2 and NL-DE/LU bidding zone borders are not part of this CCR)

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Capacity Calculation Region 3: Central-west Europe (CWE) including non-EU bidding zone borders

Bidding zone borders	TSOs involved	Countries involved
FR-BE, BE-NL, FR-DE/LU, NL-DE/LU, BE-DE/LU, Switzerland – France (CH-FR)*, Switzerland – Germany/Luxembourg (CH-DE/LU)*, Switzerland – Austria (CH-AT)*	Elia System Operator NV/SA, RTE – Réseau de transport d'électricité, TenneT TSO B.V., Amprion GmbH, TransnetBW GmbH, TenneT TSO GmbH, 50Hertz Transmission GmbH, Austrian Power Grid AG*, Creos Luxembourg S.A., Swissgrid AG*	Belgium, France, The Netherlands, Germany, Austria*, Luxembourg, Switzerland*

*The bidding zone borders will be included in the CCR CWE in the future, subject to the fulfilment of the legal requirements for the application of CACM Regulation in Switzerland in accordance to Article 1 (4) and (5)of CACM Regulation.

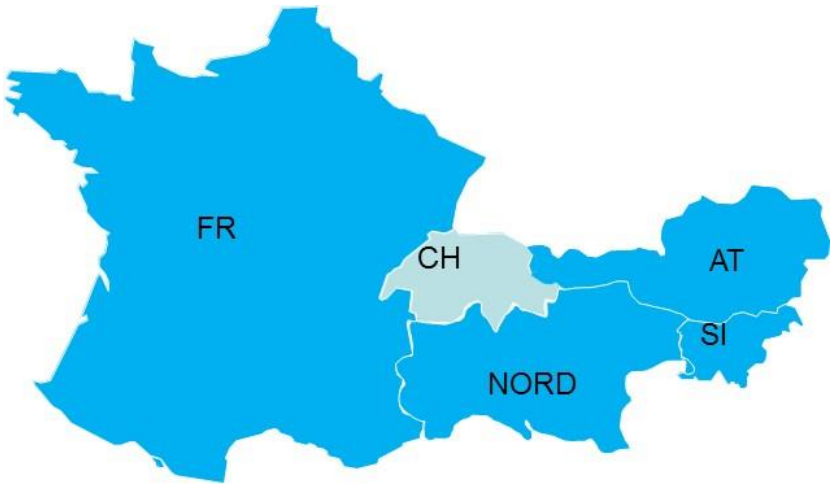
Figure A3: Bidding zones of the CCR CWE (DE/LU - AT bidding zone border is not part of this CCR)

Capacity Calculation Region 4: Italy North including non-EU bidding zone borders

Bidding zone borders	TSOs involved	Countries involved
NORD-FR, NORD-AT, NORD-SI Italy NORD-Switzerland (NORD-CH)*	TERNA Rete Elettrica Nazionale S.p.A., RTE – Réseau de transport d'électricité, Austrian Power Grid AG, ELES d.o.o., Swissgrid AG*	Italy, France, Austria, Slovenia, Switzerland*

*The bidding zone borders will be included in the future in the CCR Italy North, subject to the fulfilment of the legal requirements for the application of CACM Regulation in accordance to Article 1 (4) and (5) of CACM Regulation.

Figure A4: Bidding zones of the CCR Italy North (AT-SI, CH-AT and CH-FR bidding zone borders are not part of this CCR)



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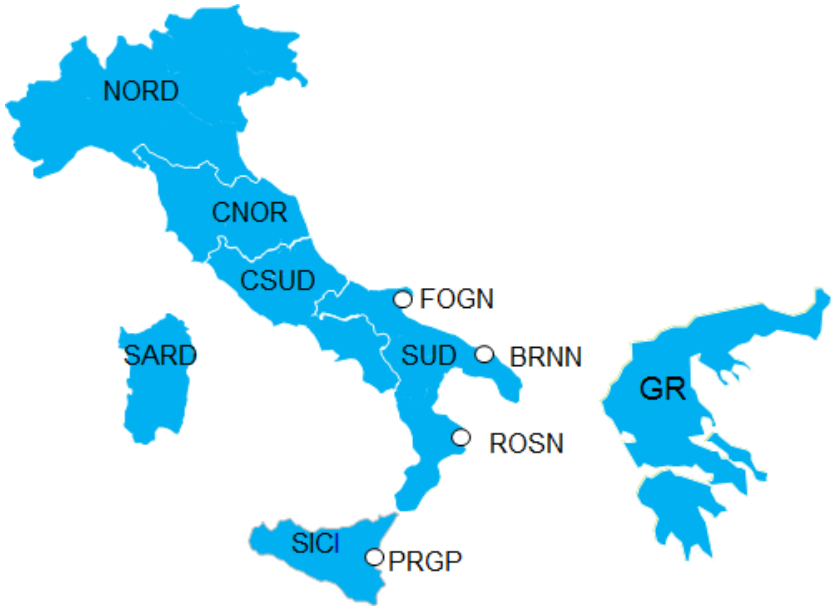
Capacity Calculation Region 5: Greece-Italy (GRIT)

Bidding zone borders	TSOs involved	Countries involved
BRNN-GR, NORD-CNOR, CNOR-CSUD, CNOR-SARD, SARD-CSUD, CSUD-SUD, SUD-BRNN, SUD-FOGN, SUD-ROSN, ROSN-SICI, SICI-PRGP	TERNA Rete Elettrica Nazionale S.p.A., Independent Power Transmission Operator S.A.	Italy, Greece

Figure A5: Bidding zones of the CCR GRIT



Capacity Calculation Region 6: Central Eastern Europe (CEE)

Bidding zone border	TSOs involved	Countries involved
DE/LU-PL, DE/LU-CZ, AT-HU, AT-SI, CZ-SK, AT-CZ, CZ-PL, HU-SK, PL-SK, HR-SI, HR-HU, RO-HU, DE/LU-AT	50Hertz Transmission GmbH, TenneT TSO GmbH, PSE S.A., ČEPS, a.s., Austrian Power Grid AG, MAVIR Hungarian Independent Transmission Operator Company Ltd., ELES, d.o.o., Slovenská elektrizačná prenosová sústava, a.s., Croatian Transmission System Operator Ltd. (HOPS d.o.o.), Compania Națională de Transport al Energiei Electrice "Transelectrica" S.A.	Germany, Poland, Czech Republic, Austria, Hungary, Slovenia, Slovakia, Croatia, Romania
New bidding zone border: HU-SI	No change	No change

Figure A6: Bidding zones of the CCR CEE

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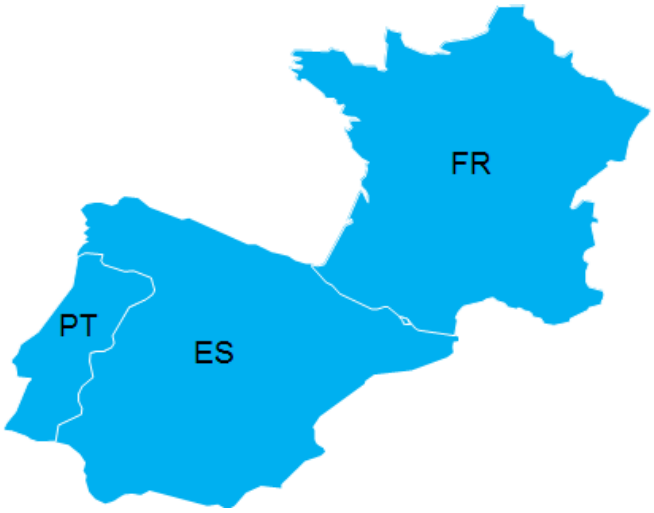
Capacity Calculation Region 7: South-west Europe (SWE)

Bidding zone borders	TSOs involved	Countries involved
FR-ES, ES-PT	RTE - Réseau de transport d'électricité, REE - Red Eléctrica de España, S.A.U., REN - Rede Eléctrica Nacional, S.A.	France, Spain, Portugal

Figure A7: Bidding zones of the CCR SWE



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Capacity Calculation Region 8: Ireland and United Kingdom (IU)

Bidding zone border	TSOs involved	Countries involved
SEM* – GB	EirGrid, Moyle, NGET, SONI	Ireland, United Kingdom

*SEM = Single Energy Market in Ireland and Northern Ireland.

Figure A8: Bidding zones of the CCR IU

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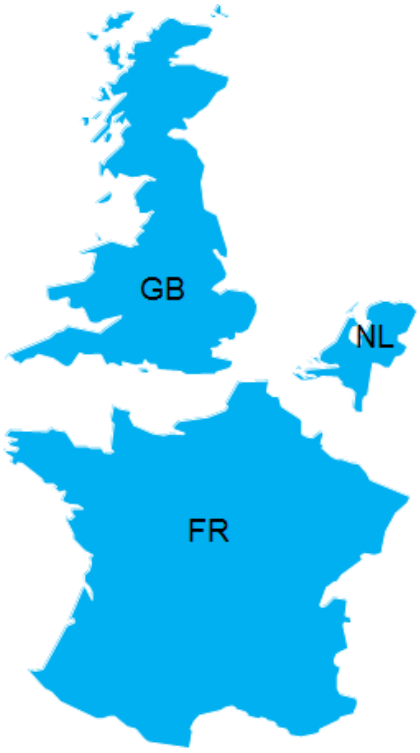
Capacity Calculation Region 9: Channel

Bidding zone border	TSOs involved	Countries involved
FR-GB, NL-GB	RTE - Réseau de transport d'électricité, NGET, NGIC, BritNed, Tennet TSO B.V.	France, United Kingdom, Netherlands

Figure A9: Bidding zones of the CCR Channel



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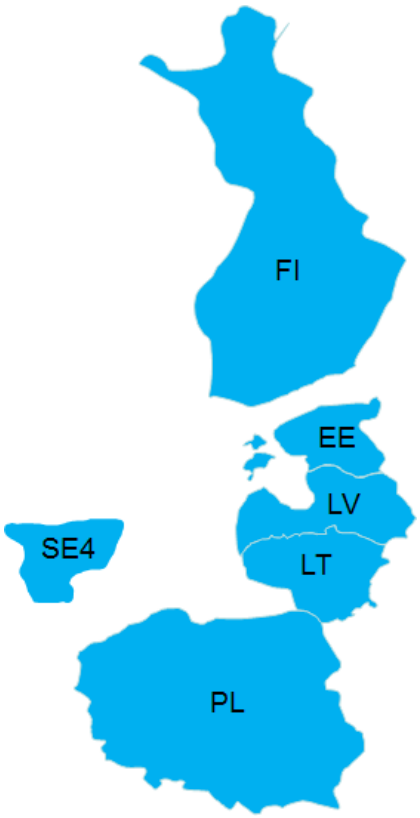
Capacity Calculation Region 10: Baltic

Bidding zone border	TSOs involved	Countries involved
EE-LV, LV-LT, EE-FI,	Elering AS, Augstsprieguma tīkls, Litgrid AB, Fingrid Oyj	Estonia, Latvia, Lithuania, Finland
New bidding zone borders: LT-SE4, LT-PL	Svenska kraftnät, PSE S.A.	Sweden, Poland

Figure A10: Bidding zones of the CCR Baltic (SE4-PL bidding zone border is not part of this CCR)



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Capacity Calculation Region 11: South-east Europe (SEE) including non-EU bidding zone borders

Bidding zone borders	TSOs involved	Countries involved
GR-BG, BG-RO, Serbia - Hungary (RS-HU)*, Serbia – Croatia (RS-HR)*, Croatia – Bosnia and Herzegovina (HR-BA)*, Bosnia and Herzegovina – Serbia (BA-RS)*, Bosnia and Herzegovina – Montenegro (BA-ME)*, Serbia – Montenegro (RS-ME)*, Serbia – Romania (RS-RO)*, Serbia – Bulgaria (RS-BG)*, Serbia – FYROM (RS-MK)*, Greece – FYROM (GR-MK)*, Bulgaria – FYROM (BG-MK)*, Italy – Montenegro (IT-ME)**	Independent Power Transmission Operator S.A., Elektroenergien Sistemen Operator (ESO) EAD, Croatian Transmission System Operator Ltd. (HOPS d.o.o.), Compania Naţională de Transport al Energiei Electrice "Transelectrica" S.A, JAVNO PREDUZEĆE ELEKTROMREŽA SRBIJE BEOGRAD (JP EMS BEOGRAD)*, Nezavisni Operator Sistema u Bosni i Hercegovini (NOS BiH)*, CGES AD*, Operator na elektroprenosniot sistem na Makedonija, Akcionersko drushtvo za prenos na elektricna energija I upravuvanje so elektroenergetskiot system na Makedonija, vo drzavna sopstvenost, Skopje*, TERNA Rete Elettrica Nazionale S.p.A.**	Greece, Bulgaria, Romania, Croatia*, Hungary*, Serbia*, Bosnia-Herzegovina*, Montenegro*, FYR of Macedonia*, Italy**

*The bidding zone borders will be included in the CCR SEE in the future, subject to the fulfilment of the legal requirements for the application of CACM Regulation, when CACM Regulation shall become an effective law in the national legal framework of each of these countries after the adoption of the CACM Regulation by the respective national legislation. Other SEE TSOs and the bidding zones borders for which they are responsible may join to CCR SEE when predefined conditions are met.

**The bidding zone border IT-ME will be included in the CCR SEE when the interconnection between Italy and Montenegro is commissioned (expected to be in 2017/2018) and subject to the fulfilment of any other legal requirements for the application of the CACM Regulation by Montenegro.

Figure A11: Bidding zones of the CCR SEE (HU-RO and HU-HR bidding zone borders are not part of this CCR)

ANNEX 2 – Future bidding zone borders

This Annex is attached to this explanatory document for informational purposes only and describes some new bidding zone borders for EU Member States to be included in the relevant CCRs in the future due to some future interconnections still under construction and to be commissioned after 2018 or not yet operated by legal entities certified as TSOs. Any changes in the future will have to be reflected in the CCR composition by amending the CCRs Proposal in accordance with the CACM Regulation.

Capacity Calculation Region 2: Hansa

Bidding zone borders	TSOs involved	Member States involved
DK1-DE/LU, DK2-DE/LU, SE4-PL, SE4-DE/LU*, DK1-NL	Energinet.dk, TenneT TSO GmbH, 50Hertz Transmission GmbH, Svenska kraftnät, PSE S.A., Baltic Cable AB*, Tennet TSO B.V.	Denmark, Germany, Sweden, Poland, Netherlands

*The geographical border SE4-DE/AT/LU will be included in the CCR Hansa after the legal entity operating the interconnection connecting the respective bidding zones becomes a certified TSO.

3.10 Capacity Calculation Region 9: Channel

Bidding zone border	TSOs involved (including ones under national certification process)[3]	Member States involved
FR-GB, NL-GB, BE-UK*	RTE – Réseau de transport d'électricité, NGET, NGIC, BritNed, Tennet TSO B.V., Elia System Operator NV/SA*, ElecLink*	France, United Kingdom, Netherlands, Belgium*

*The bidding zone border BE-UK will be included in the CCR Channel after the interconnection has been commissioned and the relevant TSO(s) have been certified for the operation of the interconnection connecting the respective bidding zones.

[3] The process is pending in the United Kingdom.

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ANNEX 3: Roadmap for longer term CCRs Configuration

Article 20(5) of the CACM Regulation considers adjacent CCRs from the moment they are applying flow based capacity calculation methodology in the same synchronous area as one region for the purpose of capacity calculation. It is anticipated that the CCRs of CWE and CEE will be the first adjacent regions implementing flow based capacity calculation methodology, and thus the first CCRs obliged to submit a proposal for a common flow based capacity calculation methodology. How the TSOs from the CCRs of CWE and CEE propose to cooperate for the merging of the two CCRs is presented above under Chapter 6. When this common flow based capacity calculation methodology is implemented it should in practice mean a de facto merging of the CCRs for capacity calculation purposes. The timeline for this implementation depends on the implementation of flow based capacity calculation methodology in the CCR CEE. When CCRs of both CWE and CCE have implemented flow based capacity calculation these CCRs have 12 months to implement common flow based capacity calculation methodology for the day ahead timeframe and 18 months for intraday timeframe. When these CCRs apply a common flow based capacity calculation methodology, the relevant TSOs from these CCRs shall assess if the conditions set in Article 15(3) of the CACM Regulation are fulfilled to merge these two regions. Merging the CCRs of CWE and CEE will happen if the conditions set in the Article are fulfilled. This however does not preclude an intensified cooperation and coordination, or even an early merger of both CCRs.

Article 20 of the CACM Regulation sets timelines for application of flow based capacity calculation methodology to the CCR Italy North. In particular, the TSOs of the CCR Italy North have to submit the proposal for a common coordinated flow based capacity calculation methodology no later than 10 months after the approval of the CCR Italy North, unless the same TSOs agree to extend this deadline up to 6 months after Switzerland joins the single day-ahead market coupling. At the time when flow based capacity calculation is implemented in the CCR Italy North, merging with the adjacent CCR applying the flow based capacity calculation will be assessed by the relevant TSOs; these TSOs shall according to the CACM Regulation submit a proposal for a common flow based capacity calculation methodology. In the future, CCR Italy North could be in principle the first one merging with CCR CWE-CEE.

Article 20(4) of the CACM Regulation sets timelines for application of flow based capacity calculation methodology to SEE region also.

CCRs of Channel and Hansa may serve as interim solutions to facilitate the technical process associated with the path to CCRs integration. Currently the interconnections described above as CCR Channel (see Chapter 3.9) are already considered in parallel with the CWE flow-based market coupling, as detailed in the CWE section 3.4. It is also foreseen that as the current level of interconnection increases in the near future (see annex 2 for future bidding zone borders) the level of interaction between Channel and Continental Europe (be this latter either CCR CWE or CCR CWE-CEE) will be re-evaluated within the step-wise approach for integration and the appropriateness of merging these regions in terms of security and welfare will be revisited. This will also be considered alongside with the deployment of flow-based capacity calculation to this CCR. Notwithstanding, the operational security issues detailed in section 3.9 and 3.10 will need to be adequately addressed in any future proposal for merging that would necessitate modifying the capacity calculation methodology. The CCR Hansa will be merged either with the CCR CWE-CEE (when such region exists) or the Nordic CCR depending on where the largest interdependencies between the borders exist and also taking into account planned new interconnections. TSOs foresee that merging of the CCR Hansa will be assessed when the flow based capacity calculation methodology has been implemented in the eventually merged CCR CWE-CEE or the CCR Nordic.

The CCR Baltic may be merged with the CCR Nordic or CCR CEE (or CCR CWE-CEE) in the future as Baltic countries are in between different CCRs. The timeline and CCR to be merged with, will depend on

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assessment and decision to be made in the future. The decision has to take into consideration that i) marketwise, Baltic countries are already connected to Nordic ones, ii) a common balancing market (Baltic-Nordic) is in project phase now and iii) there are also increased cross-border capacities with Nordics. In addition, from the system operational (as well as capacity calculation) side, Baltic countries are connected to non-EU countries because of interconnectivity and synchronous operation with Russia and Belarus – the so called BRELL Loop. Therefore, the decision for the merger has also to take into account the possibility of the CCR Baltic to implement the flow based capacity calculation while operating synchronously with the non-EU countries.

TSOs foresee that the CCRs GRIT, SWE and IU will remain as defined in this CCRs Proposal until there will be more bidding zone borders and interconnections from these CCRs to other CCRs, i.e. when interdependencies between these CCRs and adjoining CCRs increase.

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ANNEX 4: Detailed Comments received on the CCRs Proposal during the Public Consultation

Organisation	Comments on legal requirements
APREN	Merging bidding zones into the same Capacity Calculation Region is a key objective, keeping them separate is not efficient. So, we do not understand why this condition is dependent from a request of the competent authority asking for "a cost-benefit analysis requested from the competent authority to prove the efficiency of the merger". This condition should be removed.
Finnish Energy Industries	We find the requirements well-defined.
AFEER-Association of Electricity Suppliers in Romania	As EU Member state, we have no further legal requirements for CCR proposal, related to Regulation 1222/2015's implementation.
Swedenergy	ENTOS-E states that "Capacity calculation for the day-ahead and intraday market timeframes should be coordinated at least at the regional level to ensure that capacity calculation is reliable and that optimal capacity is made available to the market." The meaning of optimal is unclear and indicates a risk that TSOs will reduce capacity available to the market more than necessary. This could be the case if the optimization is done with TSO interests to be optimized. With reference to article 3 of the CACM guidelines Swedenergy would like to add to the requirements that capacity should be optimized from a European socioeconomic perspective.
EDF	EDF welcomes this ENTSO-E consultation on the TSOs common draft proposal for Capacity Calculation Regions (CCRs) which gives stakeholders the opportunity to express their views on this topic. The involvement of stakeholders in the implementation process of the CACM Regulation, is of paramount importance to ensure the transparency and accountability of the choices made by all TSOs. In this view, stakeholders wish to be associated as much as possible with the elaboration process of the deliverables foreseen in the CACM Regulation and, in particular, to be consulted on the basis of detailed impact assessments supporting the proposed evolutions. Recalling that terms and conditions or methodologies should include […] a "description of their impact on the objectives of this Regulation" pursuant to Article 9(9) of the CACM Regulation, EDF regrets that TSOs do not provide a detailed impact assessment that justifies their CCRs proposal neither in terms of observed interdependency across bidding zone borders nor in terms of optimal use of transmission

	infrastructure. This remark is all the more important considering that this CCRs consultation is the first of many other public consultations foreseen in the implementation process of the CACM Regulation. Therefore, EDF expects that all TSOs will provide in the future a detailed impact assessment backing their proposals and a comparative analysis of different options, to ensure a transparent and efficient consultation and decision process. This is necessary to enable stakeholders to provide valid inputs or comments during the implementation process of the CACM Regulation. We also support the idea that any future decision aimed to enlarge or merge CCRs will have to be reflected in a transparent amendment procedure of the existing configuration of CCRs in accordance with the CACM Regulation. In this view, we understand that any amendment to CCRs composition will be adopted pursuant to the same process (stakeholder consultation, TSOs decision and NRAs approval).
BDEW Bundesverband der Energie- und Wasserwirtschaft e.V.	BDEW would like to highlight the importance of the CCRs and the underlying bidding zone configuration for the electricity market design. CACM is very clear, that TSOs must make a joint proposal on the CCRs. As this is the start-ing point for CACM and many important future implementation steps, BDEW expects the proposal to focus on the as-is situation and not mix up future discussions on congestion management and capacity allocation with the proposal of the CCRs, especially on the issue of bidding zone configuration. In the early implementation of CACM, one task is to assess the bidding zone configuration. Results are expected to be available in the second quarter of 2016. In BDEW's view the proposal for CCR should not preempt such an analysis. Furthermore, CACM foresees regular reviews of bidding zone configuration, which should follow an orderly process based on the pilot bidding zone study. CACM does require TSOs to propose the CCRs, but the consultation is actually managed by ENTSO-E. BDEW expects this consultation to have a binding character for all TSOs and that the results will be reinforced by the related NRAs. For that, we would recommend a common agreement of NRAs involved in a CCR.
Vattenfall AB	ENTOS-E states that "Capacity calculation for the day-ahead and intraday market timeframes should be coordinated at least at the regional level to ensure that capacity calculation is reliable and that optimal capacity is made available to the market." The meaning of optimal is unclear and indicates a risk that TSOs will give less capacity than is available to the market. This could be the case if the optimization is done with TSO interests to be optimized. With reference to article 3 of the CACM guidelines Vattenfall would like to add to the requirements that capacity should be optimized from a European socioeconomic perspective.
CEZ, a.s., Duhová 2 / 1444,	We do not have any specific comments related to this part.

140 53 Praha 4, Czech Republic	
Energie-Nederland	CCRs are a very important tool to let TSOs operate as one and efficiently calculate the grid capacity for the market. Perhaps even more important is the Common Capacity Calculator function. We expect that within this function TSOs calculate the capacity in the respective bidding zones with one single calculation rather than the coordinated result of individual calculations. We expect the final proposal of the TSOs to be binding and enforced by the related NRAs. For that we would recommend a common agreement for regulatory oversight of NRAs involved in a CCR.
EURELECTRIC	CCRs are a very important tool to let TSOs operate as one and efficiently calculate the grid capacity for the market. Perhaps even more important is the Common Capacity Calculator function. EURELECTRIC expects that within this function TSOs calculate the capacity in the respective bidding zones with one single calculation rather than the coordinated result of individual calculations. EURELECTRIC expects the final TSOs' proposal to be binding and being reinforced by the related NRAs. For that we would recommend a common agreement of NRAs involved in a CCR.

Organisation	**Comments on general principles**
APREN	This proposal for the organization of the CCRs must not final and a freeze solution. It must be clearly stressed that new solutions or proposals can be made in a near future in order to introduce improvements based on the experience obtained, having in mind the objective of "enlarging the Regions as technically possible".
Finnish Energy Industries	We find the general principles well-defined.
AFEER-Association of Electricity Suppliers in Romania	General principles are stipulated in the Regulation 1222/2015 and are accordingly transposed in ENTSO-E document.
Europex	1. Europex welcomes the paper by ENTSO-E as part of the CACM implementation. Europex has long been an active promoter and enabler of European market integration, and the optimal availability of transmission capacity is critical to achieving this goal. Harmonisation of capacity calculation methodologies within and between regions, together with improvements in the precision and timeliness (e.g., intraday recalculation) of the calculation methods and processes, should be a high priority with significant benefits for Europe. 2. The CCR definition should support the efficient operation of single day-ahead and intraday market coupling. The reason being that it can

	impact the time- and cost-effective implementation of the IEM Target Model across Europe. 3. We would like to better understand the approach (including, inter alia, assumptions, model(s), scenario(s), selection criteria) used to decide on the particular regions proposed in the paper. a. Were there alternatives that were considered, and why were they not selected instead? b. Was a common assessment methodology for the determination of all CCRs used? Were similar criteria applied, and what were they? c. Was an assessment made of the impact of the CCR solution performed? For example, the implications for market stakeholders. d. Was there consideration of the impact on existing market couplings (in operation as well as in development/implementation phase), ensuring that the proposed CCRs are not putting these initiatives (which represent real progress towards the IEM target) at risk? 4. We are concerned that the CCR could become, in effect, permanent. They may lead to regions adopting different capacity calculation methodologies that could make it harder to merge regions in the future. Standardisation of methodologies may mitigate this, but it is not clear if this is intended and how it can be achieved in practice. 5. The CCRs should allow for some flexibility so that they do not become barriers for possible new development paths, such as incremental extension of existing regions. 6. We would like to see a clearer vision for the target capacity calculation regions (we assume it would be fewer regions), and a roadmap for how this will be achieved. This would also help establish the necessity for the interim regions to adopt common methodologies that can be more readily integrated later. It would also reduce the risk of TSOs introducing non-coordinated and possibly contradictory new functional requirements to the DA and ID market coupling algorithms. 7. We are concerned about the possible practical implications of the exclusion of presently non-EU/non-CACM countries from the CCRs, and of certain proposed solutions involving a stepwise approach. a. We know that Norway since the mid-1990s is a core member of the Nordic coordination of capacity calculation and allocation from the Day Ahead to real time Balancing Market stage. We expect this to continue, but wonder if there is any impact on those integrated Nordic processes if Norway initially will not be legally a part of the Nordic CCR. b. While Switzerland may not be part of the DA/ID capacity allocation, are they still fully able to participate in the capacity calculation in the relevant CCRs? c. Why is a two-step approach applied for including the RO-HU border in the in CEE CCR? What are the economic and security benefits of such approach? 8. We believe that, considering the possible implications that the approved CCRs will bring for all involved stakeholders, very careful consideration should be applied in the process of CCRs definition and approval - and a high degree of transparency is very important. Existing regional stakeholder structures could play a useful role.
EDF	Coordination among TSOs at the regional level is key to further integrate energy markets and ensure system security. In this view, EDF considers that regional coordination should follow a progressive and pragmatic approach, and be based as much as possible on existing platforms already deployed in the framework of Regional Security Coordination initiatives (RSCIs). EDF considers that CCRs determination should build up on existing entities such as Coreso or TSC, having already demonstrated valuable contribution to system security and providing a good example of efficient TSOs cooperation at the regional level that should be pursued. In particular, EDF considers that the advisory role of such entities should be extended to the following areas: regional capacity calculation, cross-border redispatching, HVDC

	and Phase-Shifting Transformers. In the present proposal, many existing regions according to Regulation 714/2009 have been separated into two different regions (for example: UI and Channel; Nordic and Hansa; Italian north borders and Italian borders 2), which could be considered as a lack of ambition of TSOs. EDF believes that TSOs should clearly present and justify in the consultation document the reasons related to governance issues or technical and local specificities that lead to the definition of smaller CCRs. If the current pragmatic approach presenting a short-term view of the geographical scope of CCRs is understandable in this context, we consider however that it is necessary to provide market participants with an outlook and a clear timeline of the next steps foreseen by TSOs to enlarge or merge the CCRs in the near future as well as the way capacity calculators could also merge in the medium-long term. In EDF's view, this outlook should also integrate the future interconnector projects that will be commissioned in the mid-term perspective (n+5 horizon). Taking the example of Channel region, the Annex 2 "Future bidding zone borders" identifies NEMO and Eleclink projects, but does not mention FAB Link, IFA2, Viking nor NSN projects which have a connection date in 2020. For completeness, they should be acknowledged in the final proposal for CCRs and included in an outlook of CCRs evolution in the coming years.
BDEW Bundesverband der Energie- und Wasserwirtschaft e.V.	The definition of a CCR requires that there is only one methodology used in the region. This may not be helpful in consolidating capacity calculation. Even in the CCRs mentioned, there are differences in calculation e.g. related to redispatch. Therefore, BDEW would like to em-phasize the importance of the Common Capacity Calculator function that may comprise sev-eral methodologies. With this function, there is the possibility to be ambitious and to start a fast process towards a single calculation.
CEZ, a.s., Duhová 2 / 1444, 140 53 Praha 4, Czech Republic	The Article 3 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management sets binding targets that has to be fulfilled (mainly points a/ "promoting effective competition in the generation, trading and supply of electricity", h/ "respecting the need for a fair and orderly market and fair and orderly price formation", e/ "ensuring fair and non-discriminatory treatment of market participants" and j/ providing non-discriminatory access to cross - zonal capacity). If the CEE CCR proposal copies current delineation of the CEE region, it will freeze actual market inefficiencies and problems related to the unscheduled transit flows. Non-coordinated cross-border capacity calculation and allocation will not contribute to the ultimate targets (fulfilment of the binding CACM objectives) as set in the Article 3 of the new CACM Regulation. In other words, the CEE CCR without the inclusion of the DE-AT border will not, from the very beginning, be in line with the new CACM Regulation, as it will fail in ensuring the effective competition in the generation, trading and supply of electricity, fair and non-discriminatory treatment of market participants together with providing non-discriminatory access to cross–border/zonal capacity.
VERBUND AG	The CACM-Network Code is (as all other Network Codes) an important element in building a common European internal energy market. Therefore, when discussing about the definition of CCRs the ultimate goal of a common European energy market should not be lost out of sight.

	Against this background, VERBUND has some concerns as regards the proposal of as many as 11 CCRs. From our perspective defining less CCRs would better serve the ultimate goal of bringing Europe's electricity markets together. We do not deem it useful to have that many CCRs, as such a large number of CCRs would be far too complicated. It would be more efficient to have less CCRs from the beginning, avoiding merging discussions at a later stage. Regulation (EC) No 714/2009 itself is only referring to four regions (CWE, CEE, SWE, SEE). TSOs should rely on these definitions and on existing TSO regional cooperation. We understand, that TSOs face some kind of timing pressure and that a quick implementation of CCRs would be desirable. However, the main focus should be – in the spirit of the internal market – to reduce complexity, therefore to have as few uniform regions as possible. Also, it is not clear when CCRs would be merged in the future: the draft proposal is only referring vaguely to the need to assess the need for lager CCRs in "due time" and "as early as possible". There should be at least a date when the CCRs should be re-evaluated.
Energie-Nederland	The definition of a CCR requires that there is only one methodology used in the region. This may not be helpful in consolidating capacity calculation throughout the regions. Even in the CCRs mentioned there are differences in calculation e.g. related to redispatch. Therefore we would like to emphasize the importance of the Common Capacity Calculator function that may comprise several methodologies as we have learned in the ENTSO-E workshop on 14 September 2015. With this function there is the possibility to be ambitious and to start a fast process towards a single calculation.
EURELECTRIC	The definition of a CCR requires that there is a common methodology used in the region. Even in the CCRs mentioned there are differences in calculation e.g. related to redispatch. Therefore EURELECTRIC would like to emphasize the importance of the Common Capacity Calculator function that may comprise several methodologies as we have learned in the ENTSO-E workshop on 14 September 2015. With this function there is the possibility to be ambitious and to start a fast process towards a single calculation.
EFET	First and foremost, we note that the TSOs proposal lacks a thorough impact assessment of the proposed delineation of CCRs, as well as an analysis of possible alternatives. While we are conscious that time is pressing to designate the CCRs in compliance with the deadline set in the CACM Guideline (EU Regulation 2015/1222), it is uneasy for market participants to give an informed view on the TSO proposal. In addition, we note that the CACM Guideline does not foresee a review process for the CCRs. It is unclear to us when and on which grounds CCRs may be reviewed and potentially modified. Periodical reviews will help identify the CCRs that can be joined to form a common CCR. The TSO proposal could contain suggestion to fill the gap left by the CACM Guideline on this matter. We call on TSOs to clarify the timeline and triggers for a review and possible re--- delineation of CCRs. We suggest a periodical review of the CCRs – every four or five years – accompanied by a full impact assessment of the current situation and of possible changes to the CCRs.

Organisation	Comment on impact on objectives of CACM
APREN	We agree with the statement in the consultation document: "Large number of CCRs decrease the coordination possibilities across bidding zone borders, implying less optimal use of transmission infrastructure". We also agree with the opinion that the flow based calculation is the most effective. As consequence we recommend that this proposal for the CCRs organization should only constitute a kick off and a temporary solution that must evolve to a next proposal with fewer CCRs and enlarged Regions and ensuring that the calculation is supported by a flow based method.
Finnish Energy Industries	We agree with the proposed objectives, but call in addition for further cooperation within and between the regions and for looking into the possibilities whether TSOs in a region could merge part of their function in order to fasten the capacity calculation and make it more robust while in the same time giving more capacity to the market.
AFEER-Association of Electricity Suppliers in Romania	ENTSO-E proposal does not provide several alternatives for CCR design and also lack an evaluation of their impact on market efficiency
Swedenergy	We regard the CCRs as center piece for the evolving European market. We propose that the Capacity Calculator role is considered to be extended to cover system and market operations currently managed by TSOs.
EDF	EDF considers that TSOs should provide a detailed impact assessment to fully justify their proposal. They should further clarify the criteria and figures they will take into account in terms of observed interdependency across bidding zone borders or concerning the objective of optimal use of transmission infrastructure. Alternative options should also be assessed to take into account the expected impact of the proposed CCRs on electricity markets and analyze all potential benefits and costs related to their implementation. Otherwise, there is a risk that solutions based on status quo are preferred to different ones, without proper justifications based on economic efficiency and market integration. Such impact assessment and comparative analysis should also be considered in the view of the objectives set in the CACM Regulation. One of the main targets for an increased regional TSOs cooperation is namely "optimizing the calculation and allocation of cross-zonal capacity" in order to maximize the volumes of cross-zonal capacities allocated to the market and to ensure the optimal use of existing transmission infrastructures. The CACM Regulation aims also at developing a better coordinated use of common remedial actions

	(redispatching and countertrading) to facilitate more efficient capacity allocation and avoid unnecessary curtailments of cross-border capacities. Thus, EDF regrets that the present proposal is limited to the expectations declared by TSOs and do not provide an adequate assessment of the best way to fulfill the CACM objectives.
BDEW Bundesverband der Energie- und Wasserwirtschaft e.V.	BDEW would like to remind ENTSO-E that a well-working electricity market depends on a robust market design. Therefore, we would expect the conclusions not to incur preemptive changes to the existing bidding zone configuration. The objective of the CACM guideline is to let the market make maximum use of the existing network. BDEW believes that the current proposal does not give the comfort for improvement of the current situation. Capacity is still being calculated on an individual basis (although the development of a common grid model is an improvement). This results in inefficiencies and slower process. Further improvement of the calculation should be analysed in-depth before any discussion around the delimitation of bidding zones. In our view discussing bidding zones based on the basis an inefficient calculation may lead to wrong incentives to TSOs: the attitude of viewing the capacity calculation from a national or control area perspective.
Vattenfall AB	We regard the CCRs as center piece for the evolving European market. We propose that the Capacity Calculator role is considered to be extended to cover system and market operations currently managed by TSOs.
CEZ, a.s., Duhová 2 / 1444, 140 53 Praha 4, Czech Republic	As it was mentioned in the previous parts, the determination of the CEE CCR without the DE-AT border inclusion does not respect the declared binding CACM objectives as set in Article 3, because from our point of view, it will fail to ensure the effective competition in the generation, trading and supply of electricity, fair and non-discriminatory treatment of market participants together with providing non-discriminatory access to cross - zonal capacity. We expect that the CEE CCR determination without the inclusion of the DE-AT bidding zone border will not only keep current market inefficiencies but also will deepen the problem of market participants´ discrimination, especially in connection with further expected RES growth. See more in the question 2.2 commentary.
Energie-Nederland	The objective of the CACM code is to let the market make maximum use of the existing network. Energie-Nederland believes that the current proposal doesn't give the comfort for improvement of the current situation. As TSOs still calculate capacity on an individual basis (although the development of a common grid model is an improvement). This results into inefficiencies and a slow process. The ENTSO-E proposal is based on the status quo and doesn't give the plan to improve further. Improvement of the calculation is for Energie-Nederland a higher priority than the discussion of delimitation of bidding zones. In our view discussing bidding zones based on an inefficient calculation leads to wrong incentives to TSOs: the attitude of viewing the capacity calculation from a national or control area perspective.
EURELECTRIC	The objective of the CACM guideline is to let the market make maximum use of the existing network. EURELECTRIC believes that the current proposal doesn't give enough comfort for improvement of the current situation. The development of a common grid model is an improvement, but TSOs still calculate capac-ity on an individual basis. This results into inefficiencies and a slow process. The ENTSO-E proposal is rightly based on the status quo but doesn't give the plan to improve further.

	Further improvement of the calculation should be analysed in depth before any discussion of delimitation of bidding zones. In our view, discussing bidding zones based on an inefficient calculation leads to wrong incentives to TSOs: the attitude of viewing the capacity calculation from a national or control area perspective.
EFET	We note that the number of CCRs in the proposal is greater than the number of coordinated congestion management regions in EU Regulation 714/2009. As explained above, we understand that the two concepts are different; they are however related. While one of the additions corresponds to the inclusion of the SEE region (CCR #11) that the Regulation did not take into account, other additions seem have been introduced to facilitate and speed up the adoption of various methodologies to be applied in the different CCRs. This is notably the case for the Hansa (CCR #2) and Channel (CCR #9) regions, which isolate the interconnector between continental Europe and the Nordic region / the British Isles, and the separation of the Italian bidding zone borders in two CCRs (#4 and 5). EFET is not opposed to a definition of CCRs that would facilitate the implementation of CACM GL. However, TSOs must keep in mind the fundamental objective of the CACM GL and EU Regulation 714/2009, i.e. the harmonisation of rules on capacity allocation, congestion management and trade in electricity. It 3 therefore appears to us that the CCRs such as the "buffer regions" #2 and #9 should be thought of as temporary, and that the number of CCRs should be progressively reduced in the coming years. EFET calls on TSOs to clarify the reasons for the inclusion of the "buffer zones" CCR #2 and #9, and to publish an indicative timeline identifying the projected mergers of CCRs in the coming years, according to the available information on the evolution of the various coordination projects on---going in Europe.

Organisation	Comments on implementation timeline
APREN	The document should define deadlines for TSOs to implement the measures and processes.
Finnish Energy Industries	We agree with the need to implement CCRs swiftly, and call for faster inclusion of the mentioned non EU members.
Swedenergy	Swedenergy firmly believes that the further development of the internal energy market needs to be stepwise and through deepened regional co-operation. Over time we expect that the benefit from increased coordination will lead to more capacity to be available for trade and thus a further integration of the European energy market.
EDF	EDF welcomes TSOs' engagement not to delay the establishment of capacity calculation regions and to adopt as soon as possible the common capacity calculation methodologies and the other methodologies to be established at the CCR level. In order to improve transparency towards market participants on the implementation timeline, the consultation document should also include the expected date of adoption by all TSOs and of NRAs' approval of this proposal, as far as many deadlines set in the CACM are depending on such approval. For instance, a coordinated capacity calculator is to be identified 4 months after NRAs' approval of CCRs composition and the common capacity calculation methodology is to be adopted 16 months after the same deadline.

BDEW Bundesverband der Energie- und Wasserwirtschaft e.V.	CACM is quite clear on the timelines and BDEW will support the process to abide the dead-lines. However, BDEW would welcome a more ambitious perspective on the future developments.
Energie-Nederland	The implementation timeline in CACM is clear and should be met. It is a missed opportunity that TSOs do not plan beyond these timelines in order to give the perspective of developments.
EURELECTRIC	The implementation timeline in CACM is clear and should be met. It is a missed opportunity that TSOs do not plan beyond these timelines in order to give the perspective of developments.

Organisation	**Comments future composition including non EU members**
Finnish Energy Industries	We agree with the proposed future composition, but call for swifter inclusion.
AFEER-Association of Electricity Suppliers in Romania	For the CEE CCR, we do not see the need of a two steps approach in including the RO-HU border into this capacity calculation region, and we strongly mitigate for one step approach (as for all other CCR) – see detailed comment in item 6 of the second part of consultation - Comments on the proposed regions and specific borders
Swedenergy	We suggest that the non EU members are included in the regional development work that will intensify when the regions are finalized.
EDF	EDF welcomes ENTSO-E's effort to already involve informally non-EU countries in the definition of CCRs, so that EU countries and non-EU countries can start working together according to the future composition of CCRs to reach as soon as possible the targets set in the CACM Regulation. However, we consider that this should not delay the adoption of the deliverables expected from CCRs. It should also be noted that the omission of the bidding zones borders of Swiss or Norwegian bidding zones will probably undermine the functioning of the relevant CCRs. We encourage therefore TSOs to pursue their efforts and facilitate the inclusion of these borders in the proposed CCRs.
BDEW Bundesverband der	BDEW would assume that the same rules apply then as well.

Energie- und Wasserwirtschaft e.V.	We would like to see the non-EU members included in the calculation from the beginning in order to ensure an efficient and fast regional integration.
Vattenfall AB	We suggest that the Non EU members are included in the regional development work that will intensify when the regions are finalized.
CEZ, a.s., Duhová 2 / 1444, 140 53 Praha 4, Czech Republic	We welcome the inclusion of Annex 1, tackling the treatment of existing interconnected bidding zones borders between EU Member States and countries not yet subject to the CACM GL. While this annex is not officially part of the approval process requested in the CACM GL, we would like to point out a number of elements: We appreciate that the EU TSOs have collaborated with their non-EU counterparts on Annex 1, beyond the pure legal requirements of the CACM GL. We believe that the non-inclusion of the bidding zones borders between EU Member States and the Swiss or Norwegian bidding zones will be detrimental to the functioning of the relevant CCRs. We encourage TSOs to pursue their efforts and facilitate the inclusion of these borders in the proposed CCRs. As mentioned in earlier contributions and public statements, we are opposed to the CACM GL provisions discriminating against non-EU TSOs and non-EU market participants which may participate to the European single day-ahead coupling and single intraday coupling. These provisions interfere with EU external energy policy since most non-EU countries which are able to participate to day- ahead and intraday market coupling have already formalised their external energy policy with the EU or are in the process of formalising it. Non-EU TSOs and non-EU market participants should participate in the single day-ahead coupling and in the single intra-day coupling as fast as possible since this would effectively contribute to creating an integrated European electricity market, to enhancing security of supply and to increasing flexibility within Europe and allow for cross-border electricity exchange between non-adjacent EU Member States. We call for a swift adoption of the CACM GL provisions in EEA Member States and a resolution of the political hindrance to the full inclusion of Switzerland in the European electricity market integration projects, including through the integration of their bidding zones borders in the proposed CCRs.
VERBUND AG	Capacity Calculation Region 3: Central-west Europe (CWE) VERBUND welcomes that Austria is proposed to be part of the CCR CWE. As acknowledged by the draft paper, it is only logical to include Austria in the CWE: Austria forms a common bidding zone with Germany. Austria has historically always had very close technical relations to the German electricity system. Austria is integrated in the CWE since decades and is since 2013 also official member of the Pentalateral Energyforum. The Austrian TSO, APG, is integrated in the CWE flow-based capacity calculation. The CEE region, in contrast, has not seen the same development as the CWE region yet as it has not introduced market coupling (in particular flow-based capacity calculation) so far and it might still take some time until this is realised.

	The common Austrian-German market forms one of the biggest and most liquid electricity markets within the EU and the only real cross-border market area in Europe. Historically, Austria and Germany have made massive investments in grid infrastructure making a common market possible. Until today, there is no structural bottleneck at the German-Austrian border due to this effort. Apart from the fact that the German-Austrian energy market is a showcase for European integration, one of the other big advantages of an German-Austrian bidding zone lies in the fact that Austria is able to provide flexibility by its major pumped storage capacities helping to integrate the surplus of renewables in the common market. Should the bidding zone be split, pumped storage plants could not be used any more to their full capacity, cross-border balancing projects would have to be set on hold. VERBUND has taken notice of the legally non-binding recommendation agreed at the Board of Regulators of ACER proposing a split of the Austrian-German bidding zone. When discussing the configuration of the CCRs the ACER opinion should be taken as what it is, an important but nevertheless non-binding recommendation. In order to have a well-founded basis for deciding on the alienation of bidding zones, the CACM bidding zone review process has been introduced, currently undertaking an all-encompassing assessment of current bidding zones and possible future bidding zone configurations (not limited to only grid flows and cross-border facts). Primarily the outcome of this process should be taken into account when deciding on CCRs. We would also like to note in this respect that introducing congestion management at a border without structural congestions breaches Union law, in particular Regulation 714/2009. Finally, VERBUND would welcome a swift integration of Switzerland in the CCR CWE – ideally from the beginning, recognising that Entso-e faces legal constraints regarding the integration. However, we would like to highlight that Switzerland is factually in the heart of the European electricity market, has huge interconnection-capacities between north and south and would be well prepared to participate in the common process.
Energie-Nederland	Energie-Nederland would like to see the non EU members (Switzerland, Norway) included in the calculation from the beginning. For us this is a technical aspect and we would see this as a form of early implementation and not directly related to the trade arrangements, which may of consideration in negotiations on a higher level.
EURELECTRIC	EURELECTRIC would like to see the non-EU members included in the calculation from the beginning in order to ensure an efficient and faster regional work. Excluding them in the process makes no sense as it ignores the reality of this highly interconnected market with EU countries and will only add bureaucracy. Excluding them in the process makes no sense as it ignores the reality of this highly

	interconnected market with EU countries and will only add bureaucracy. For us this is a technical aspect and we would see this as a form of early im-plementation and not directly related to the trade arrangements, which may of consideration in negotiations on a higher level.
EFET	EFET also welcomes the inclusion of Annex 1, tackling the treatment of existing interconnected bidding zones borders between EU Member States and countries not yet subject to the CACM GL. While this annex is not officially part of the approval process requested in the CACM GL, we would like to point out a number of elements: • We appreciate that the EU TSOs have collaborated with their non---EU counterparts on Annex 1, beyond the pure legal requirements of the CACM GL. We believe that the non---inclusion of the bidding zones borders between EU Member States and 4 the Swiss or Norwegian bidding zones will be detrimental to the functioning of the relevant CCRs. EFET encourages TSOs to pursue their efforts and facilitate the inclusion of these borders in the proposed CCRs. As mentioned in earlier contributions and public statements, EFET is opposed to the CACM GL provisions discriminating against non---EU TSOs and non---EU market participants which may participate to the European single day---ahead coupling and single intraday coupling. These provisions interfere with EU external energy policy since most non---EU countries which are able to participate to day--- ahead and intraday market coupling have already formalised their external energy policy with the EU or are in the process of formalising it. Non---EU TSOs and non---EU market participants should participate in the single day---ahead coupling and in the single intra---day coupling as fast as possible since this would effectively contribute to creating an integrated European electricity market, to enhancing security of supply and to increasing flexibility within Europe and allow for cross---border electricity exchange between non---adjacent EU Member States. EFET calls for a swift adoption of the CACM GL provisions in EEA Member States and a resolution of the political hindrance to the full inclusion of Switzerland in the European electricity market integration projects, including through the integration of their bidding zones borders in the proposed CCRs. EFET has no specific comment on Annex 2 on the future bidding zones borders resulting from new interconnections.

Organisation	Other general comments
APREN	The load flow based calculation method advocate by the Commission Regulation 2015/1222, is strongly supported by APREN. The reluctance of some countries or TSOs to adhere to this methodology should be overcome with a fare distribution of responsibilities and tasks among national entities and Operators of the participant countries.
Finnish Energy Industries	The CCRs should form the basis for the TSO-cooperation in Europe. Hence, future decisions and cooperation should primarly follow the CCR-areas, so that in further integration processes preferably the whole CCR would be included and not just a part of it.
AFEER-Association of	Since the European regions, as by Regulation 714, were set-up a decade ago, they no longer reflect the actual EU energy sector development, in terms of internal market and Energy Union, therefore we consider that the ENTSO-E proposal for the capacity calculation

Electricity Suppliers in Romania	regions should fill-in this gap as an essential step towards IEM implementation. In this respect, a proposal based mostly on regions as defined by the 714 Regulation (CWE, CEE, SWE, SEE) and on existing TSO regional cooperation, does not entirely respond to our expectations and we ask ENTSO-E for a more targeted approach towards region redesign for CCR.
OPCOM	Considering the implications that the approved CCRs will bring for all involved stakeholders, an extremely careful consideration of the impact of the proposal of CCR definition is needed. In this context, it would be appreciated to be clarified if the impact on the existing operational market coupling frameworks was assessed when designing and assessing the potential CCR solutions. This is moreover important having in mind the overall European effort dedicated to the achievement of the strategic goal of establishing and operating the Single day-ahead and intraday market couplings, with the European widespread implementation of the related Target Model, that requires a pragmatic, balanced and effective increasingly pan-European oriented approach.
Swedenergy	In accordance with the Regulation a bidding zone border should only belong to one CCR. This implies that one bidding zone may have borders to several CCRs. Thus one bidding zone may be directly influenced by actions in different CCRs. Therefore, coordination between CCRs is important. How that will be ensured is at the moment not clear. Therefore a transparent process needs to be established. How the borders between CCRs should be managed needs clarification. The CACM stipulates that all zones within a CCR should use the same allocation method i.e. Flowbased or NTC but the treatment of the interface needs more clarification. We expect that the method is NTC/ATC but we urge for clarification. How the border between SE4 and DE is to be managed until its part of the Hansa region as shown in Annex 2 needs to be presented as that information is lacking in the consultation document.
BDEW Bundesverband der Energie- und Wasserwirtschaft e.V.	The current proposal captures the current configuration of bidding zones and that is exactly what we expected given the definition of a CCR. In that perspective we also understand the choice for "border" CCRs like Hansa. However, we fear that this may increase the coordination burden and will slow down the process. Much more important is that these CCRs must be robust enough to be merged in the future. In fact, TSOs should keep in mind that the regions must remain compatible with each other. As this is the first consultation related with the implementation of CACM, we are concerned that ENTSO-E proposes only one solution/ one set of CCR (no alternative) without any im-pact assessment. Section 4 of the document lists a number of criteria, that need to be taken into account to design CCRs, and we could consider that they are relevant, but the consulta-tion document proposes no evaluation.

	Furthermore, BDEW fully supports the merit of market coupling and its beneficial effects on social welfare. However, in order to create a competitive market environment, all available transmission capacity must be made available for cross-border traders in the forward mar-kets. We regret the lack of an "Annex 3" with the planning for future merger of CCRs and the plan-ning for the Common Capacity Calculator function, which would give more comfort to the market. Given the fact that there are many debates and issues between CWE and CEE we strongly recommend to at least start with a Common Capacity Calculator function for both regions together in order to quickly establish a CCR comprising the two regions. This should be possible as CWE already has implemented flow based calculation and CEE is working on it. Furthermore we would like to emphasize that capacity calculation is still intransparent and improvement is urgently needed. This also counts for changes in capacity calculation, which should be transparent and implemented with care. A faster coordinated recalculation of the domain after the DA clearing could solve the issue of limited XB capacities on intraday mar-kets. Speed will be a key element for the success of market integration. We would also like to emphasize the need for transparency on redispatch and other remedial actions. Finally, the mission of the CCRs could include the coordination on the management of HVDC lines and phase shifters, as those have strong impact on cross-border exchange capabilities and redispatching.
Vattenfall AB	In accordance with the Regulation a bidding zone border should only belong to one CCR. This implies that one bidding zone may have borders to several CCRs. Thus one bidding zone may be directly influenced by actions in different CCRs. Therefore, coordination between CCRs is important. How that will be ensured is at the moment not clear. Therefore a transparent process needs to be established. How the borders between CCRs should be managed needs clarification. The CACM stipulates that all zones within a CCR should use the same allocation method i.e. Flowbased or NTC but the treatment of the interface needs more clarification. We expect that the method is NTC/ATC but we urge for clarification. How the border between SE4 and DE is to be managed until its part of the Hansa region as shown in Annex 2 needs to be presented as that information is lacking in the consultation document.
VERBUND AG	VERBUND welcomes the stakeholder involvement in the definition of the Capacity Calculation Regions (CCRs) and thanks Entso-e for the opportunity to comment on the TSOs draft proposal for CCRs as the first consultation on the implementation of the CACM Network code.
TIWAG-Tiroler Wasserkraft AG	TIWAG-Tiroler Wasserkraft AG, welcomes the opportunity to comment on the Capacity Calculation Regions (CCRs). TIWAG-Tiroler Wasserkraft AG generally supports the tailoring of the CCRs as it is presented in the "All TSOs' draft proposal for

	Capacity Calculation Regions (CCRs)". In particular we welcome the pionted fact, that Austria is a member of the Central-Western Europe (CWE) Region as this is a necessary and valuable fact for the German-Austrian Bidding Zone. The accurate description of the largest actually integrated market within the EU, with a very high level of liquidity, market efficiency and competitiveness, as well as stability is fundamentally necessary for a proper design of the CCRs. Thank you for taking our comments into consideration. If you have any further questions, please do not hesitate to contact us.
Energie-Nederland	The current proposal captures the current configuration of bidding zones and that is exactly what we expected given the definition of a CCR. In that perspective we also understand the choice for "border" CCRs like Hansa and Channel. However we fear that this would increase the coordination burden and will slow down the process. We regret the lack of an "Annex 3" with the planning for merger of CCRs and the planning for the Common Capacity Calculator function, which would give more comfort to the market. Given the fact that there are many debates and issues between CWE and CEE we strongly recommend to at least start with a Common Capacity Calculator function for both regions together in order to quickly establish a CCR comprising the two regions. This should be possible as CWE already has implemented flow based calculation and CEE is working on it. Furthermore we would like to emphasize that capacity calculation is still highly intransparent and improvement is urgently needed. This also counts for changes in capacity calculation, which should be transparent and implemented with care. We would also like the emphasize the need for transparency on calculation of, amongst others, the TRM, redispatch and other remedial actions, market assumptions and network topology.
Enel S.p.A.	Enel welcomes the first consultation on Capacity Allocation and Congestion Guidelines, which are one of the first stepping stones in the creation of common European day-ahead and intraday electricity markets. The definition of Capacity Calculation Regions (CCRs) is based on the assumption that a bidding zone border can only be assigned to one CCR, while a bidding zone could be part of several CCRs. In addition, ENTSO-E's study on the revision of the bidding zone configuration should be finalised by the end of 2016 and could potentially result in changes in CCRs. Even if the proposed Capacity Calculation Regions are consistent with the legal requirements of Guidelines, the chance to accelerate the creation of a common European electricity market has been squandered. In fact, especially in Continental Europe, too many Regions have been created, thus making coordination and cooperation between TSOs more difficult. We understand that this decision has been forced by differences between TSOs operational procedures. At the same time, in order to reach the overarching goals defined in article 3 of the Guidelines, it is important to overcome them and define a credible roadmap (now missing from the consultation) for the creation of increasingly wider Capacity Calculation Regions. In addition, it would have been advisable to insert an evaluation of alternative CCRs configurations.

EURELECTRIC	The current proposal captures the current configuration of bidding zones and that is exactly what we expected given the definition of a CCR. In that perspective we also understand the choice for "border" CCRs like Hansa and Channel. However we fear that this would increase the coordination burden and will slow down the process. As this is the first consultation related with the implementation of a Network Code, we are concerned that ENTSO-E proposes only one solution/ one set of CCR (no alternative) without any impact assessment. Section 4 of the document lists a number of criteria, that need to be taken into account to design CCRs, and we could consider that they are relevant, but the consultation document proposes no evaluation. This is really worrying as the proposed CCR delineation is likely to serve as a foundation for many realizations provisionned in the CACM code (and other). We regret the lack of an "Annex 3" with the planning for future merger of CCRs and the plan-ning for the Common Capacity Calculator function, which would give more comfort to the market. Given the fact that there are many debates and issues between CWE and CEE we strongly recommend to at least start with a Common Capacity Calculator function for both regions together in order to quickly establish a CCR comprising the two regions. This should be possible as CWE already has implemented flow based calculation and CEE is working on it. Furthermore, the North Italian Borders CCRs could also be merged with the CWE CCRs given the level of interdependency between CCRs on some bidding zone borders. TSOs al-ready involved in RSCIS should use the associated coordination entities as a starting point for the design of the CCRs. Furthermore we would like to emphasize that capacity calculation is still highly intransparent and improvement is urgently needed. This also counts for changes in capacity calculation, which should be transparent and implemented with care. TSOs should also speed up their effort to improve the calculation time if they want to improve the market. Faster coordination would, for example, allow a recalculation of the domain after the DA clearing and solve the issue of limited XB capacities on intraday markets. Speed will be a key element for the success of market integration. We would also like to emphasize the need for transparency on redispatch and other remedial actions. Finally, the mission of the CCRs could include the coordination on the management of HVDC lines and phase shifters, as those have strong impact on cross-border exchange capabilities and redispatching.
EFET	CCRs are defined according to bidding zone borders, while historic coordinated congestion management regions were defined per Member States in Annex 1, point 3.2 of EU Regulation 714/2009. The two concepts are however related, as Art. 15.2.a of the CACM GL provides that the CCR proposal shall take into account the regions specified in Annex 1 of EU Regulation 714/2009. In accordance with the Regulation, a bidding zone border should only belong to one CCR. This also implies that one bidding zone may have borders linked to several CCRs, and as a consequence may be directly influenced by actions taken in different CCRs. Therefore, coordination between CCRs is important. It is however unclear at the moment how this coordination will be ensured. EFET calls on the TSOs to establish a transparent process for inter---CCR coordination, in accordance with the provisions of the Regulation.

Organisation	Comments on Capacity Calculation Region 1: Nordic
Finnish Energy Industries	We agree with the proposed CCR composition Nordic, but remind of the need to cooperate with Norway and encourage Norway to implement regulation swiftly in order to get Norwegian borders included timely.
Swedenergy	Swedenergy strongly support the proposal of region 1, allowing regional development in the best interest of the internal market and European consumers. As stated, Swedenergy perceives deepened regional co-operation as the way forward for the IEM. With reference to this high level view, we give full support to ENTSO-Es proposal that in our view allow further integration and development on the regional scale, thus providing active contribution to the fulfillment of the EU energy policy goals. This also means that the Nordic market can continue to develop and possibly deepen existing cooperation among the TSOs. This could for example be of relevance if the Nordic region would have socioeconomic rationale for staying with the NTC method rather than implementing flowbased capacity allocation. Another example would be the possibilities for the Nordic market to use existing hedging instruments when implementing the Forward Capacity Allocation Code which in latest unofficial version contain the possibility to use other instruments than Long Term Transmission Rights when TSOs allocate transmission capacity in the forward market. For the Nordic region this means that EPAD auctioning could be implemented on the borders within the region. In case the region would also comprise the continental market there is a risk that regulatory decisions are in the favor of other instruments.
Vattenfall AB	Vattenfall strongly support the proposal of region 1, allowing regional development in the best interest of the internal market and European consumers. As stated, Vattenfall perceives deepened regional co-operation as the way forward for the IEM. With reference to this high level view, we give full support to ENTSO-Es proposal that in our view allow further integration and development on the regional scale, thus providing active contribution to the fulfillment of the EU energy policy goals. This also means that the Nordic market can continue to develop and possibly deepen existing cooperation among the TSOs. This could for example be of relevance if the Nordic region would have socioeconomic rationale for staying with the NTC method rather than implementing flowbased capacity allocation. Another example would be the possibilities for the Nordic market to use existing hedging instruments when implementing the Forward Capacity Allocation Code which in latest unofficial version contain the possibility to use other instruments than Long Term Transmission Rights when TSOs allocate transmission capacity in the forward market. For the Nordic region this means that EPAD auctioning could be

	implemented on the borders within the region. In case the region would also comprise the continental market there is a risk that regulatory decisions are in the favor of other instruments.

Organisation	Comments on Capacity Calculation Region 2: Hansa
Finnish Energy Industries	We agree with the proposed CCR composition Hansa, but remind of the need to cooperate with Norway and encourage Norway to implement regulation swiftly in order to get Norwegian borders included timely.
Swedenergy	Clarification needed for how this region will work in practice. As we understand the proposal the region only consist of borders between two regions without any generation or load within the Hansa region. Load and generation seem to belong to the Nordic, the CWE and CEE regions respectively. We assume that this "region between the regions" use the coordinated Net Transfer Capacity method. In addition we suggest that the Hansa region is kept separate from the other regions as long as not Nordic, CWE and CEE use the same capacity calculation method and then could be merged.
Vattenfall AB	Clarification needed for how this region will work in practice. As we understand the proposal the region only consist of borders between two regions without any generation or load within the Hansa region. Load and generation seem to belong to the Nordic, the CWE and CEE regions respectively. We assume that this "region between the regions" use the coordinated Net Transfer Capacity method. In addition we suggest that the Hansa region is kept separate from the other regions as long as not Nordic, CWE and CEE use the same capacity calculation method and then could be merged.

Organisation	Comments on Capacity Calculation Region 3: Central-west Europe (CWE)
Swedenergy	We ask for clarification on how the exclusion of Switzerland from the regional calculation at the southern border of Germany, the eastern border of France and the northern border of Italy will work with regional capacity calculation and allocation.
EDF	We consider that the level of interdependency of some bidding zone borders might have been underestimated in the proposed CCRs. In particular, the CWE Flow Based Market Coupling already integrates the interconnectors between Great-Britain and Continental Europe (Britned and IFA), in the calculation of Flow Based parameters since high interdependency can already be observed between CWE region and Channel region. Further justifications on the way these interdependencies are taken into account could therefore be provided.
Vattenfall AB	We ask for clarification on how the exclusion of Switzerland from the regional calculation at the southern border of Germany, the eastern border of France and the northern border of Italy will work with regional capacity calculation and allocation. Assuming that FBMC will be used in highly meshed part of continental system successive merging of regions 3 (CWE), 6 (CEE) and 4 (Northern borders of Italy)

	would be in line with creating IEM and can be very beneficial (harmonized rules and methods, interdependencies can be taken into consideration better).
VERBUND AG	VERBUND welcomes that Austria is proposed to be part of the CCR CWE. As acknowledged by the draft paper, it is only logical to include Austria in the CWE: Austria forms a common bidding zone with Germany. Austria has historically always had very close technical relations to the German electricity system. Austria is integrated in the CWE since decades and is since 2013 also official member of the Pentalateral Energyforum. The Austrian TSO, APG, is integrated in the CWE flow-based capacity calculation. The CEE region, in contrast, has not seen the same development as the CWE region yet as it has not introduced market coupling (in particular flow-based capacity calculation) so far and it might still take some time until this is realised. The common Austrian-German market forms one of the biggest and most liquid electricity markets within the EU and the only real cross-border market area in Europe. Historically, Austria and Germany have made massive investments in grid infrastructure making a common market possible. Until today, there is no structural bottleneck at the German-Austrian border due to this effort. Apart from the fact that the German-Austrian energy market is a showcase for European integration, one of the other big advantages of an German-Austrian bidding zone lies in the fact that Austria is able to provide flexibility by its major pumped storage capacities helping to integrate the surplus of renewables in the common market. Should the bidding zone be split, pumped storage plants could not be used any more to their full capacity, cross-border balancing projects would have to be set on hold. VERBUND has taken notice of the legally non-binding recommendation agreed at the Board of Regulators of ACER proposing a split of the Austrian-German bidding zone. When discussing the configuration of the CCRs the ACER opinion should be taken as what it is, an important but nevertheless non-binding recommendation. In order to have a well-founded basis for deciding on the alienation of bidding zones, the CACM bidding zone review process has been introduced, currently undertaking an all-encompassing assessment of current bidding zones and possible future bidding zone configurations (not limited to only grid flows and cross-border facts). Primarily the outcome of this process should be taken into account when deciding on CCRs. We would also like to note in this respect that introducing congestion management at a border without structural congestions breaches Union law, in particular Regulation 714/2009. Finally, VERBUND would welcome a swift integration of Switzerland in the CCR CWE – ideally from the beginning, recognising that Entso-e faces legal constraints regarding the integration. However, we would like to highlight that Switzerland is factually in the heart of

	the European electricity market, has huge interconnection-capacities between north and south and would be well prepared to participate in the common process.

Organisation	Comments on Capacity Calculation Region 4: Italian North Borders
EDF	High interdependency seems to be observed between all Italian northern borders and the other Swiss borders. In this sense, the impact of the proposal to separate the France-Switzerland border (FR-CH) from the other Italian north borders in the Region 4 should be further justified and explained by an impact assessment and the analysis of different options.

Organisation	Comments on Capacity Calculation Region 5: Italian borders 2
No comments	

Organisation	Comments on Capacity Calculation Region 6: Central Eastern Europe (CEE)
GEN-I Bucharest	I would propose to include in this region Romania (with all borders), as we already have a coupled spot market with Hungary, This include also other Romanian borders, which inclusion in CEE CCR will impose a transparent allocation, based on fair principles
AFEER-Association of Electricity Suppliers in Romania	For the CEE CCR, we do not see the need of a two step approach in including the RO-HU border into this capacity calculation region, and we strongly mitigate for one step approach (as for all other CCR), taking into consideration: a. A two step approach will induce additional unjustified costs both for Romanian TSO and CEE TSOs, with negative impact on the market participants and final consumer and also will prejudice Romanian market participants, not allowing them to benefit from a flow-based capacity calculation advantage at the same time as CEE market participants (not even defining a deadline for the proposed second step). Is ENTSO-E ready to justify these issues towards regulators, stakeholders and market participants, as the document provides no argumentation for this approach? b. A two step approach will induce unjustified delays in CACM implementation for Romania, although Romanian TSO has the necessary

	technical background and knowhow as the CEE TSOs, and the Romanian market is a mature market with experienced participants, entitled to same trading opportunities (in respect of benefits of flow-based capacity calculation) as their neighbors ; c. The provisions of the CACM: § Article 15: o 2. (c) at least those TSOs shall be assigned to all capacity calculation regions in which they have bidding zone borders. o 3. Capacity calculation regions applying a flow-based approach shall be merged into one capacity calculation region if the following cumulative conditions are fulfilled: - their transmission systems are directly linked to each other; - they participate in the same single day-ahead or intraday coupling area; § Article 20.4 The TSOs from Member States which have borders with other regions are encouraged to join the initiatives to implement a common flow-based capacity calculation methodology with these regions. d. The RO-HU border is already included into implicit capacity allocation mechanism in CEE region, since November 2014, in the framework of the RO-HU-SK-CZ market coupling (4M MC project) and in the near future, as a member of the NWE-CEE FB MC project. We consider that the issues here-above are fully in line with EU regulation and vision regarding the IEM implementation aiming to ensure fair and non-discriminatory conditions for all European market participants.
OPCOM	The rationales that substantiated the proposed solution as regards the subsequent steps as regards the approach proposed for the border between the Bidding Zones Romania and Hungary are not present. Therefore, it cannot be understood why the RO-HU border is not included since the beginning in the proposed CEE CCR, considering, moreover, the current operational status for this border, that already operates in coupled regime. Please clarify on the rationales that were considered, including references related to the assessment of the impact the proposed solution for the mentioned border that was performed.
CEZ, a.s., Duhová 2 / 1444, 140 53	As ČEZ´s substantial concern relates to the CEE CCR delineation and the inclusion of the DE-AT border into the CEE CCR, our response will focus on the part 3.6., i.e. Capacity Calculation Region 6: Central Eastern Europe (CEE). Please see also our answers in 1.3, 2.2, 2.3.

Praha 4, Czech Republic	and 2.5. The ENTSO-E CCR public consultation document explicitly mentions the open question of the compliance of the congestion management on the DE-AT border with existing European Regulation (the request raised by the Polish regulator to ACER). This is one of the crucial points that must be solved before any CEE CCR determination, because as it was mentioned in the previous parts, the determination of the CEE CCR without the DE-AT border inclusion does not merely maintain current market inefficiencies in the CEE region caused by the common DEAT zone, but also does not respect the declared binding CACM objectives as set in Article 3 (a/ "promoting effective competition in the generation, trading and supply of electricity", h/ "respecting the need for a fair and orderly market and fair and orderly price formation", e/ "ensuring fair and non-discriminatory treatment market participants" and j/ providing non-discriminatory access to cross - zonal capacity). From CEZ point of view, the potential determination of the CEE CCR without the DE-AT border maintains the discrimination of market participants in countries surrounding this market area due to unequal access to the regional transmission infrastructure and the limited volume of cross-border capacity available to traders. Furthermore, the need of splitting the DE-AT market zone i.e. the inclusion of the DE-AT bidding zone border into the CEE CCR has already appeared in the context of implementation (as bindingly foreseen by CACM GL) flow-based capacity calculation (and allocation) in the CEE region. The partial results of the preparatory phase - Step 1 have been already presented both on regional and European level. The aim of this step, which is a part of so-called Security oriented option (SOO), was to identify the influence/impact of potential future limit for commercial exchanges between Germany and Austria on the efficiency of CEE flow-based capacity calculation mechanism. In total, eight options of the commercial limit between DE>AT (not vice versa) were investigated in the range of complete blocking of DE-AT border (corresponding to the limit 0 MW), at step 1000 MW up to the limit of 7000 MW (in current situation, commercial exchanges between DE-AT are not being reduced). The analysis has clearly shown that the maintenance of German-Austrian bidding zone in its current form would result in the reduction of cross-border capacity available to market participants outside the German-Austrian market area and hence in regional social welfare loss. In certain situations, the commercial exchanges on other borders could be completely stopped. The particular results of the analysis are as follows: (1) Indicator of regional social welfare* (SW): - The implementation of commercial limit between DE-AT at 0 MW (corresponding to the elimination of commercial transactions between DE-AT) leads to an increase of regional SW by about 14 percentage points (equivalent to approx. 4.2* million € in testing period

	of 120 days of the year). Thus, regional CEE SW is reduced due to exclusion of DE-AT border in the coordinated cross-border capacity allocation mechanism. *) Simulation done based on available explicit allocation and therefore reflecting in principle cross border capacity price. Loss of SW in implicit allocation environment should be naturally higher. - The application of the abovementioned limit would lead to increase regional SW in 76 % of time in the examined period. (2) The amount of cross-border commercial capacities (Non Simultaneous values): - Between DE-AT zone and the Czech Republic border, the increase in the examined period between the situation without any commercial limit and the limit of 0 MW is approx. 600 MW - Then the average increase on the above-mentioned borders in the examined period between the situation without any trading limit and the limit of 0 MW is approx. 300 MW These results clearly confirm the significant influence of the DE-AT zone on the CEE region. On the top of these facts, the need of splitting the DE-AT market zone is clearly advocated in the opinion of the ACER of 23rd September 2015. The ACER has concluded in its assessment that the German-Austrian interconnector can accommodate all physical flows resulting from international trade requested by market participants only at the expense of major structural congestions on the German-Polish, German-Czech and the Czech-Austrian borders, but also within Germany. In that respect, the German-Austrian interconnector shall be considered as usually and structurally congested according to Article 2(2)(c) of Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity, and therefore requires the implementation of a capacity allocation method pursuant to points 1.2 and 1.4 of the Guidelines annexed to that Regulation. In its Opinion, ACER invites the CEE NRAs and Transmission System Operators (TSOs) to commit, within the next four months, to the implementation of a coordinated capacity allocation procedure on the German-Austrian border, according a realistic but ambitious calendar with concrete steps. Summing up our standpoint, ČEZ is strictly against preserving the common DE/AT biding zone for the purpose of the CEE Capacity Calculation Region delineation, as this approach (indeed the unilateral step, not subject to any assessment, coordination and justification) has created a long-term discriminatory environment limiting not only our traders, but also other CEE market participants in the access to the CEE cross-border infrastructure by limiting available cross border capacities as a result of the existence of single DE-AT bidding zone. For the reasons mentioned above, we are persuaded that the correct CEE CCR delimitation (table) should contain the bidding zone border DE-AT in the first step row as well.

EFET	The status of the Slovenian---Croatian, Croatian---Hungarian and Hungarian--- Romanian bidding zones borders seems rather complex. In the TSO proposal, these three borders are included in the SEE region (CCR #11) until flow---based day--- ahead market coupling is in place in Central and Eastern Europe, at which point these borders will be included in the CEE region (CCR #6). The rationale for including these bidding zones borders in the CCR #6 only after flow---based market coupling is in place in CEE remains unclear, especially as concerns the Hungarian---Romanian border since it links two bidding zones that are part of 4M market coupling. Besides, once the three bidding zones borders leaving CCR #11, the decision making rules for the adoption of methodologies in the SEE region will change from qualified majority to unanimity as the CCR will only comprise three TSOs. This leaves the door open to potentially unforeseen changes in capacity calculation methodologies in CCR #11 once the three above---mentioned bidding zones borders join CCR #6. EFET calls on the TSOs to clarify the rationale for their complex treatment of the Slovenian---Croatian, Croatian---Hungarian and Hungarian---Romanian bidding zones borders, and to present their expectations as to the potential effects on the governance of CCR #11 of a switch of these borders to CCR #6

Organisation	**Comments on Capacity Calculation Region 7: South-west Europe (SWE)**
APREN	The geographical coverage of the calculus must be extended to improve its efficiency. So, APREN will support the integration of the Iberian Operators in a more extended area of calculation, beyond the classical South West Region "FR+ES+PT". This alternative solution will create a greater attractiveness for investors. New solutions for trade will be facilitated, promoting an efficient integration of RES and their deployment where actually they are more cost-effective.

Organisation	**Comments on Capacity Calculation Region 8: Ireland and United Kingdom (IU)**
No comments	

Organisation	Comments on Capacity Calculation Region 9: Channel
EDF	CCR Region 9 currently consists of France, UK and the Netherlands. We note that both projects NEMO and Eleclink have been identified in Annex 2 – Future bidding zone borders. We are also aware that FAB Link and IFA2 have been recently awarded the cap and floor in principle by Ofgem and have a connection date in 2020. We presume these projects will also be included in CCR Region 9. For completeness, they should be acknowledged in the final proposal for CCRs and included in an outlook of CCRs evolution in the coming years.

Organisation	Capacity Calculation Region 10: Baltic
Finnish Energy Industries	We agree with the proposed CCR composition Baltic.

Organisation	Capacity Calculation Region 11: South-east Europe (SEE)
GEN-I Bucharest	Move Romanian from this zone to CEE
AFEER-Association of Electricity Suppliers in Romania	Accordingly to the comment to point 6 – one step approach should be also applied to this region and the RO-HU border to be removed from this CCR.
OPCOM	As referrers to the RO-HU border, please observe the answer provided above at the CEE CCR related question.
EFET	The status of the Slovenian---Croatian, Croatian---Hungarian and Hungarian--- Romanian bidding zones borders seems rather complex. In the TSO proposal, these three borders are included in the SEE region (CCR #11) until flow---based day--- ahead market coupling is in place in Central and Eastern Europe, at which point these borders will be included in the CEE region (CCR #6). The rationale for including these bidding zones borders in the CCR #6 only after flow---based market coupling is in place in CEE remains unclear, especially as concerns the Hungarian---Romanian border since it links two bidding zones that are part of 4M market coupling. Besides,

	once the three bidding zones borders leaving CCR #11, the decision making rules for the adoption of methodologies in the SEE region will change from qualified majority to unanimity as the CCR will only comprise three TSOs. This leaves the door open to potentially unforeseen changes in capacity calculation methodologies in CCR #11 once the three above---mentioned bidding zones borders join CCR #6. EFET calls on the TSOs to clarify the rationale for their complex treatment of the Slovenian---Croatian, Croatian---Hungarian and Hungarian---Romanian bidding zones borders, and to present their expectations as to the potential effects on the governance of CCR #11 of a switch of these borders to CCR #6