

**APPROVAL BY THE CHANNEL REGULATORY
AUTHORITIES
OF**

**THE AMENDED CHANNEL TSO PROPOSAL FOR THE
COMMON CAPACITY CALCULATION METHODOLOGY**

27 November 2018

I. Introduction and legal context

This document elaborates an opinion of the Channel Regulatory Authorities, agreed on 27 November 2018, on the amended Channel Transmission System Operators' (TSOs) proposal of common capacity calculation methodology (hereinafter referred to as the "Channel CCM") for the day-ahead and intraday market timeframe in accordance with Article 20 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (Regulation 2015/1222).

This agreed opinion of the Channel Regulatory Authorities shall provide evidence that a decision on the Channel CCM for the day-ahead and intraday market timeframe does not, at this stage, need to be adopted by the Agency for the Cooperation of Energy Regulators (ACER) pursuant to Article 9(11) of the Regulation 2015/1222. It is intended to constitute the basis on which the Channel Regulatory Authorities will each subsequently make national decisions pursuant to Article 9(7)(a) and to Article 9(12) of Regulation 2015/1222.

The legal provisions that lie as the basis for the common capacity calculation methodology, and this Channel Regulatory Authority agreed opinion on the common capacity calculation methodology, can be found in Article 3, 9, 20 and 21 of Regulation 2015/1222. These Articles are set out below for reference.

Article 3 of Regulation 2015/1222:

Objectives of capacity allocation and congestion management cooperation

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;*
- (j) Providing non-discriminatory access to cross-zonal capacity*

Article 9 of Regulation 2015/1222:

Adoption of terms and conditions or methodologies

- 1. TSOs and NEMOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the competent regulatory authorities within the respective deadlines set out in this Regulation. Where a proposal for terms and conditions or methodologies pursuant to this Regulation needs to be developed and agreed by more than one TSO or NEMO, the participating TSOs and NEMOs shall closely cooperate. TSOs, with the assistance of ENTSO for Electricity, and all NEMOs shall regularly inform the competent regulatory authorities and the Agency about the progress of developing these terms and conditions or methodologies.*

[...]

5. *Each regulatory authority shall approve the terms and conditions or methodologies used to calculate or set out the single day-ahead and intraday coupling developed by TSOs and NEMOs. They shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 6, 7 and 8.*
6. *The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities:*
 - e. *the proposal for a harmonised capacity methodology in accordance with Article 21(4)*
7. *The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities:*
 - a. *the common capacity methodology in accordance with Article 20(2);*
(...)
8. (...)
9. *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.*
10. *Where the approval of the terms and conditions or methodologies requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, within six months following the receipt of the terms and conditions or methodologies by the regulatory authority or, where applicable, by the last regulatory authority concerned.*
11. (...)
12. *In the event that one or several regulatory authorities request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 6, 7 and 8, the relevant TSOs or NEMOs shall submit a proposal for amended terms and conditions or methodologies for approval within two months following the requirement from the regulatory authorities. The competent regulatory authorities shall decide on the amended terms and conditions or methodologies within two months following their submission. Where the competent regulatory authorities have not been able to reach an agreement on terms and conditions or methodologies pursuant to paragraphs (6) and (7) within the two-month deadline, or upon their joint request, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 713/2009. If the relevant TSOs or NEMOs fail to submit a proposal for amended terms and conditions or methodologies, the procedure provided for in paragraph 4 of this Article shall apply.*
13. (...)
14. *TSOs and NEMOs responsible for establishing the terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the competent regulatory authorities or, if no such approval is required, after their establishment, except where such information is considered as confidential in accordance with Article 13.*

Article 20 of Regulation 2015/1222:

Introduction of flow-based capacity calculation methodologies

1. *For the day-ahead market time-frame and intraday market time-frame the approach used in the common capacity calculation methodologies shall be a flow-based approach, except where the requirement under paragraph 7 is met.*
2. *No later than 10 months after the approval of the proposal for a capacity calculation region in accordance with Article 15(1), all TSOs in each capacity calculation region shall submit a proposal for a common coordinated capacity calculation methodology within the respective region. The proposal shall be subject to consultation in accordance with Article 12. The proposal for the capacity calculation methodology within regions pursuant to this paragraph in capacity calculation regions based on the 'North-West Europe' ('NWE') and 'Central Eastern Europe' ('CEE') as defined in points (b), and (d) of point 3.2 of Annex I to Regulation (EC) No 714/2009 as well as in regions referred to in paragraph 3 and 4, shall be complemented with a common framework for coordination and compatibility of flow-based methodologies across regions to be developed in accordance with paragraph 5.*

[...]

Article 21 of Regulation 2015/1222:

Capacity calculation methodology

1. *The proposal for a common capacity methodology for a capacity region determined in accordance with Article 20(2) shall include at least the following items for each capacity calculation time-frame:*
 - a. *Methodologies for the calculation of the inputs to capacity calculation, which shall include the following parameters:*
 - (i) *a methodology for determining the reliability margin in accordance with Article 22;*
 - (ii) *the capacity methodologies for determining operational security limits, contingencies relevant to capacity calculation and allocation constraints that may be applied in accordance with Article 23;*
 - (iii) *the methodology for determining the generation shift keys in accordance with Article 24;*
 - (iv) *the methodology for determining remedial actions to be considered in capacity calculation in accordance with Article 25.*
 - b. *a detailed description of the capacity calculation approach which shall include the following:*
 - (i) *a mathematical description of the applied capacity calculation approach with different capacity calculation inputs;*
 - (ii) *rules for avoiding undue discrimination between internal and cross-zonal exchanges to ensure compliance with point 1.7 of Annex I to Regulation (EX) No 714/20017*
 - (iii) *rules for taking in to account, where appropriate, previously allocated cross-zonal capacity*
 - (iv) *rules on the adjustment of power flows on critical network elements or of cross-zonal capacity due to remedial actions in accordance with Article 25;*

[...]

- (vi) *for the coordinated net transmission capacity approach, the rules for calculating cross-zonal capacity, including the rules for efficiently sharing the power of flow capabilities of critical network elements among different bidding zone borders;*
 - (vii) *where the power of flows on critical network elements are influenced by cross-zonal power exchanges in different capacity calculation regions, the rules for sharing the power flow capabilities of critical network elements among different capacity calculation regions in order to accommodate these flows.*
- c. *a methodology for the validation of cross-zonal capacity in accordance with Article 26*
2. *For the intraday capacity calculation time-frame, the capacity calculation methodology shall also state the frequency at which capacity will be reassessed in accordance with Article 14(4), giving reasons for the chosen frequency.*
 3. *The capacity calculation methodology shall include a fallback procedure for the case where the initial capacity calculation does not lead to any results.*
 4. *All TSOs in each capacity calculation region shall, as far as possible, use harmonised capacity calculation inputs. By 31 December 2020, all regions shall use a harmonised capacity calculation methodology which shall in particular provide for a harmonised capacity calculation methodology for the flow based and for the coordinated net transmission capacity approach. The harmonisation of capacity calculation methodology shall be subject to an efficiency assessment concerning the harmonisation of the flow-based methodologies and the coordinated net transmission methodologies that provide for the same level of operational security. All TSOs shall submit the assessment with a proposal for the transition towards a harmonised capacity calculation methodology to all regulatory authorities within 12 months after at least two capacity calculation regions have implemented common capacity calculation methodology in accordance with Article 20(5).*

II. The Channel TSOs proposal

The common capacity calculation methodology for the day-ahead and intraday market timeframe proposal was consulted on by the Channel TSOs through the European Network of Transmission System Operators for Electricity's (ENTSO-E) website for over one month from 23 June 2017 to 31 July 2017, in line with Article 20 and Article 12 of Regulation 2015/1222.¹

The TSOs submitted a first proposal in September 2017. The Channel Regulatory Authorities issued a first request for amendment on 20 March 2018. The Channel TSOs submitted an amended proposal on 20 May 2018. Considering that Channel TSOs had not appropriately taken into account their first request for amendment, the Channel Regulatory Authorities issued a second Request for Amendment on 27 July 2018. The amended Channel TSOs' proposal for the Channel CCM was received by the last Regulatory Authority on 27 September 2018. The proposal includes proposed timescales for its implementation and a description of its expected impact on the objectives of Regulation 2015/1222, in line with Article 9(9) of Regulation 2015/1222.

Regulation 2015/1222 requires the competent Regulatory Authorities to consult and closely cooperate and coordinate with each other in order to reach an agreement and take decisions within two months following receipt of an amended proposal by the last regulatory authority. A decision is therefore required by each Regulatory Authority by 27 November 2018.

¹ The public consultation held 23 June 2017 to 31 July 2017 is available on the ENTSO-e website: https://consultations.entsoe.eu/markets/capacity-calculation-methodology-channel-ccr/consult_view/

The proposal contains the methodologies outlined in Article 21(1)(a) of Regulation 2015/1222. It is inclusive of the inputs for the day-ahead and intraday Capacity Calculations, a description of the capacity calculation approach required by Article 21(1)(b), a methodology for the validation of cross-zonal capacity in line with Article 21(1)(c) and a fallback methodology, required in line with Article 21(3).

The Channel CCM is based on the application of a Coordinated Net Transmission Capacity (CNTC) approach for the day-ahead and intraday capacity calculation in the Channel Region. A separate proposal for the application of the CNTC approach has been submitted to Channel Regulatory Authorities. Channel Regulatory Authorities have agreed to approve the CNTC methodology and will adopt that in their national decisions on 27 November 2018.

III. Channel Regulatory Authority position

In the original request for amendment published in March 2018², the Channel Regulatory Authorities requested multiple amendments in order to ensure the methodology included the necessary level of detail to be considered satisfactory.

In the second request, issued in July 2018³, Channel Regulatory Authorities requested several amendments to make certain that the methodology provides an appropriate degree of clarity and transparency, especially in regards to:

- the circumstances that would trigger a capacity calculation, whilst balancing the need for flexibility to accommodate future developments within the Channel Region;
- the conditions and methodologies for the application of allocation constraints.

Channel Regulatory Authorities have the two following observations regarding the new proposal:

- Channel Regulatory Authorities understand Article 7.1 of the methodology: “Each TSO of the Channel Region shall perform the selection of the critical network element and contingency (CNECs) based at least on the assessment of the cross-zonal flow sensitivity trade sensitivity” as “Each TSO of the Channel Region shall perform the selection of the CNECs based at least on the assessment of the cross-zonal flow sensitivity”.
- In Article 24.6, Channel TSOs set a transparency framework specific to the two allocations constraints defined in articles article 24(4)(iii) and (iv). This framework seems to provide lesser visibility to market participants on the level of these two allocations constraints.

Regarding this second issue, Channel Regulatory Authorities have consulted Channel TSOs on their intentions. Channel TSOs have responded that their intention was in fact to ensure a greater auditability of the allocation constraints defined in article 24(4)(iii) and (iv) taking into account their time-dependency as opposed to allocation constraints defined in article, 24(3) and 24(4)(i), (ii) and (v).

As such, and acknowledging the possible misunderstandings arising from the current wording, Channel TSOs have clarified their intentions and commitment to provide the following elements:

Regarding the allocation constraint defined in article 24(4)(iii):

Channel TSOs shall provide typical or historical rate of change of frequency (RoCoF) constraint figures for common scenarios, such as a summer night minimum demand scenario as opposed to daytime or winter night demand scenario. The associated inertia, protection trigger levels etc. that feed into the calculation, of the largest permissible loss, shall be outlined to illustrate how these

² Channel Regulatory Authority Position Paper published in March 2018 : https://www.ofgem.gov.uk/system/files/docs/2018/03/channel_common_capacity_calculation_methodology_request_for_amendment.pdf

³ Channel Regulatory Authority Position Paper published in July 2018: https://www.ofgem.gov.uk/system/files/docs/2018/07/channel_common_capacity_calculation_methodology_nra_position_paper.docx.pdf

variables impact on the level of the constraint. These examples will aid market participants in anticipating RoCoF constraint levels in a variety of common scenarios:

- In periods of low system inertia, which correlates with periods of low demand, such as summer nights the largest permissible loss is low, therefore the RoCoF allocation constraint is low and capacity reduced
- In periods of high system inertia, which correlates with periods of high demand, such as winter days the largest permissible loss is high, therefore the RoCoF allocation constraint is high and capacity is maximised
- RoCoF allocation constraints commonly apply at night and more onerously in periods of reduced demand, such as summer months

Regarding the allocation constraint defined in article 24(4)(iv):

Maximum permissible DC transfers given a certain post fault short circuit level, of a line commutated interconnector, is calculated and provided by the manufacturer to ensure its safe operation. Channel TSOs will clarify whether it is permitted to publish said technical data provided by the manufacturer. If it is permissible, Channel TSOs will endeavour to do so; if not they will provide said data to the Regulatory Authorities and provide instead typical commutation constraint scenarios demonstrating how system outages and generation profiles can impact on fault levels. All data used in calculating fault levels is contained within the GB Individual Grid Model. These examples, along with manufacturer data, will aid market participants in anticipating commutation constraint levels in a variety of common scenarios. Commutation constraints restricting interconnector capacity is uncommon.”

Given the above precisions, Channel Regulatory Authorities share the opinion that the amended Channel CCM contains sufficient detail, clarity, transparency and flexibility. Further, the Channel Regulatory Authorities are in agreement that the proposed Channel CCM will facilitate the achievement of the objectives specified within Article 3 of Regulation 2015/1222.

Consequently, the Channel Regulatory Authorities shall adopt national decisions to approve the amended Channel CCM proposal, within the two-month deadline as set out in Article 9(12) of the Regulation 2015/1222.

IV. Actions

The Channel Regulatory Authorities have assessed, consulted and closely cooperated and coordinated to reach agreement that the amended Channel CCM proposal meets the requirements of the Regulation 2015/1222 and as such can be approved.

The Channel Regulatory Authorities will therefore make their decisions, on the basis of this agreement in accordance with the two-month deadline as set out in the Regulation 2015/1222.

Following national decisions by the Channel Regulatory Authorities, the Channel TSOs will be required to publish the amended Channel CCM proposal as approved on the internet in line with Article 9(14) of Regulation 2015/1222, and must meet the implementation deadlines required by Article 28 of the amended Channel CCM.