

The CEP70 minimum requirement for cross-zonal trade: What does it mean and how is it monitored?

Malte Drerup, Mike Hermann, Bernd Höflich, Justus Huxoll, Katharina Seiter and Alanna Weigel

On 5 June 2019 the Council of the European Union and the European Parliament adopted Regulation (EU) 2019/943 on the internal market for electricity (hereafter “Electricity Regulation”) as part of the so-called “Clean Energy Package” amended by the Regulation (EU) 2024/1747 of the European Parliament and of the Council on 13 June 2024. A core objective of the Regulation is to enhance the functioning of the internal electricity market. The restriction of cross-border capacity was seen as a serious obstacle to the functioning of the European electricity market because it would discriminate between internal and cross-zonal trade.

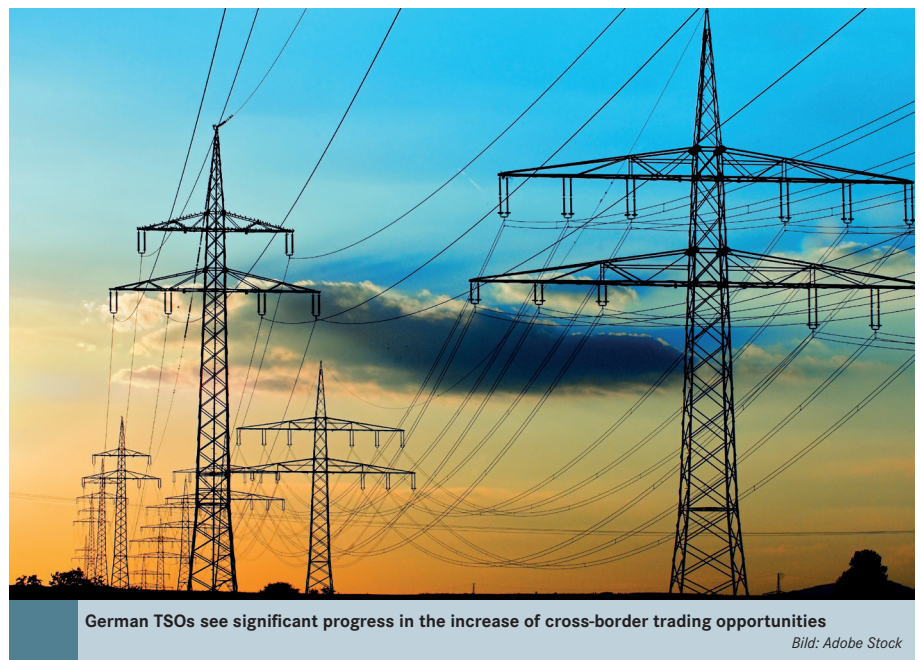
To make sure that an adequate level of transmission capacity is made available to the market, Article 16(8) introduced the 70 % minimum capacity criterion (hereafter “CEP70 requirement”). This requirement is considered met if a minimum of 70 % of transmission capacity are made available for cross-zonal trade. Transmission System Operators (TSOs) may deviate from the minimum capacity if operational security is at risk.

For Member States that have identified structural grid congestion, the Electricity Regulation provides the possibility of releasing an action plan to reduce congestion (cf. Art. 15(1)). In this case, the minimum value for cross-zonal trade capacity is to be raised annually during the period from 1 January 2020 through 31 December 2025 until reaching 70 % (so-called linear trajectory or interim requirement). Furthermore, TSOs can request a derogation from the CEP70 requirement where necessary for maintaining operational security. Derogations are granted by the relevant National Regulatory Authorities (NRAs) and are valid for one year.

Evaluation of compliance with the CEP70 requirement is a national task

The NRAs are responsible for assessing the compliance with the CEP70 requirement. To do so, TSOs must provide the relevant data annually and, in case of an action plan, submit a report to their relevant NRA for approval.

Against this background and after consultation with stakeholders and Member States, the Federal Republic of Germany submitted its *Bidding Zone Action Plan* on 28 December 2019 to the European Commission (hereafter



German TSOs see significant progress in the increase of cross-border trading opportunities

Bild: Adobe Stock

“EC”) and the Agency for the Cooperation of Energy Regulators (hereafter “ACER” or “the Agency”). The German Action Plan contains concrete measures by which Germany will counteract the structural congestion described above and raise the minimum capacity for cross-zonal electricity trading step by step to 70 % by 31 December 2025. Depending on individual starting values, separate linear trajectories were defined for the capacity calculation region (CCR) “Core” and the other German interconnectors.

An evaluation of the compliance with the linear trajectories towards the 70 % target and the associated transitory minimum value is carried out by the German TSOs and the German regulatory authority *Bundesnetzagentur* (hereafter “BNetzA”) for each year [1]. By submitting all relevant data as well as a com-

prehensive report to the BNetzA, German TSOs report on the fulfilment of the linear trajectories towards making available at least 70 % of cross-border capacity by end of 2025. Each year, the BNetzA issues a formal decision approving or rejecting the German TSO’s assessment, thereby declaring their compliance with the legal requirements.

So far, the BNetzA has approved the reports from the German TSOs, finding that the transitory minimum values for each border were complied with during the respective year.

The minimum value must be respected by the offered capacity on each critical network element with contingency or per border (“CNEC”) within every market time unit (MTU). The offered capacity Figure 1 (also referred to below as the “trade margin” or MACZT) con-

sists of two components (cf.): The first is the coordinated trade margin (MCCC) which represents the offered capacity at the border or borders in question that participate in the same capacity calculation process. The second component is the margin from non-coordinated capacities (hereafter “MNCC” or “uncoordinated margin”), which represents the consequences of the trade capacities offered at other borders not participating in the capacity calculation process for that border, while no distinction is made between third countries and Member States.

Additional market monitoring at European level

To ensure consistency and assist regulatory authorities in sharing good practices, the Agency deemed it necessary to provide guidance to TSOs and regulatory authorities on how to monitor the achievement of the CEP70 requirement. On 8 August 2019, ACER issued its Recommendation 01/2019 on the implementation of the minimum margin available for cross zonal trade (hereafter “ACER Recommendation”).

The Agency also started to provide an overview of the implementation of the minimum requirement in all Member States as part of their annual electricity wholesale market monitoring pursuant to Art. 15 of Regulation 2019/942. Against the background of this market monitoring, the Agency requests an annual reporting of relevant data from the TSOs. For its report, the Agency follows an approach laid down in the ACER Recommendation and asks TSOs to tailor their provided data accordingly. In case ACER regards the provided data incompliant or incomplete to their approach, public data is used to fill these perceived gaps. This may lead to different data bases being used for national assessments than for ACER’s report.

In its latest report published on 3 July 2024 the Agency concluded that “[...] in 2023, the TSOs furthest away from offering a minimum of 70% MACZT on all CNECs were the Austrian and Romanian TSOs, followed by the Dutch and German TSOs.[...]” [1]. In its reports and communications, ACER focuses heavily on assessing whether the 70% target has been reached today. As explained above and as it is shown in the annual reports of the German TSOs on

	BNetzA	ACER	Comment
Coordinated margin	Consideration of day-ahead flow-based (DA FB) domain and the long-term domain	Consideration of only the DA FB domain	Some of the capacity offered is not taken into account by ACER
Uncoordinated margin	Summing up all possible burdening flows	Using only forecasted flows and offsetting of burdening and relieving flows	ACER does not consider all capacities offered
Data shown in respective reports	Per MTU, the lowest trade margin of EACH network element (multiple values per MTU)	Per MTU, the lowest MACZT of ALL network elements (single value per MTU)	Since the lowest value per se does not limit trading, only the monitoring of each element per MTU gives a complete picture

Table 1 Differences between BNetzA and ACER monitoring methodology

available cross-zonal capacity, this assessment is less relevant for the moment. More relevant is the assessment of annual targets in accordance with the national action plan or derogation. Thus, ACER’s assessment may be misleading and diverting the attention from the considerable progress made so far. In addition, a detailed analysis of the differences between the national and the ACER methodology for the annual assessment is essential.

Differences between the BNetzA and ACER methodologies to calculate the CEP70 requirement

Early on, the BNetzA and ACER had different understandings of the application of the

methodology. While BNetzA implements the legal wording exactly and includes all offered trading capacities in the monitoring, ACER interprets the Electricity Regulation in a more simplified way. However, the assessment of a TSO’s compliance with the CEP70 requirement remains the responsibility of the NRA [2] – in Germany’s case the BNetzA. Table 1 gives an example comparison of the applied approaches for the CCR Core.

From the very beginning BNetzA’s views differed from ACER’s approach on computing the MNCC which describes “the portion of capacity of a CNEC available for cross-zonal trade on bidding zone borders outside the considered coordination area. MNCC may

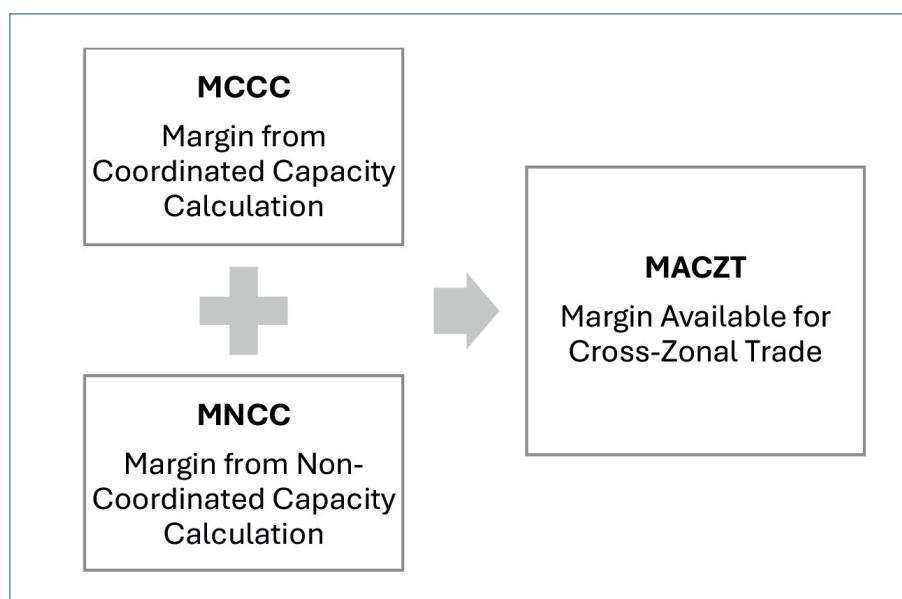


Figure 1 The margin available for cross-zonal trade

Source: The Authors

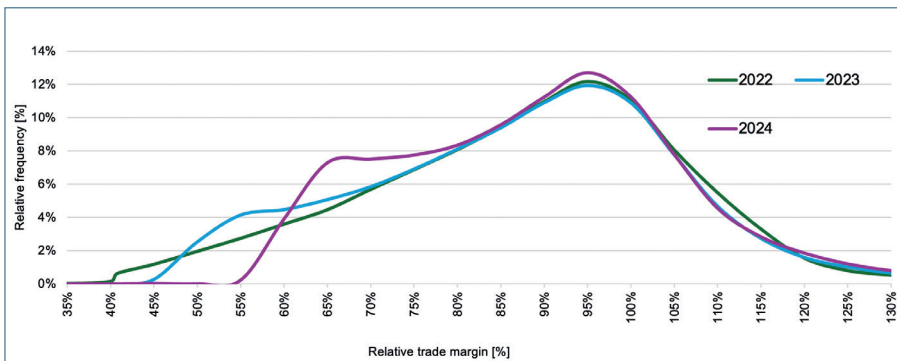


Figure 2 Frequency distribution curves showing the relative trade margin on each CNEC for each year. Note: Since the flow-based capacity calculation in Core went live in June 2022, the frequency distribution curve for 2022 is based on 4,933 MTUs. The 2023 curve is covering the full year, i.e., 8,760 MTUs. The 2024 curve covers January to June, i.e., 4,367 MTUs

Source: The Authors

consist of different flows induced by several other coordination areas” [3]. Most notably, for flow-based borders ACER calculates the uncoordinated margin based on forecasted allocated capacities, whereas German TSOs calculate the uncoordinated margin based on offered capacities, which is more in line with the legal provision of “capacity to be made available to the market”. As a result, in the ACER approach the absolute value of the coordinated margin must be higher (in some cases even higher than 70% or the transitional target) in order to still meet the minimum target in the opposite direction. The BNetzA approach on the other hand takes the impact of uncoordinated flows in both directions into account.

Another fundamental difference between the two approaches is the consideration of long-term markets. By means of the so-called “Extended Long-Term Allocation Inclusion” (LTA Inclusion), German TSOs ensure that sufficient capacities are offered in the day-ahead (DA) timeframe to allow for the payout of long-term financial transmission rights. This may lead to an increase of offered capacities. In contrast, the Agency’s monitoring focuses exclusively on the DA FB domain and thus dismisses that additional capacity may be offered because of the LTA inclusion. The Agency’s approach may therefore neglect a significant share of the capacity made available to the market.

By neglecting those capacities the Agency’s approach sets the methodological benchmark for achieving the minimum trade requirement higher than some NRAs may consider appropriate and therefore out of line with legal requirements, pressuring TSOs to operate their system under even greater risks and costs. The Electricity Regulation explicitly names NRAs as the responsible entities for approving the compliance assessment. In Germany, the validity of the applied monitoring approach is discussed transparently in the BNetzA decisions and the corresponding compliance reports.

Achievement of the CEP70 minimum requirement in CCR Core

As of June 2022, there is a coordinated capacity calculation process in place within CCR Core. As Germany applies an action plan, the CEP70 requirement for German grid elements increased from 31.0 % in 2022 to 40.8 % in 2023, and to 50.5 % in 2024. The yearly monitoring reports of the German TSOs for the years 2022 and 2023 were already approved by BNetzA, confirming the compliance with the CEP70 requirement for these years. Figure 2 presents a density curve for all German network elements, showing the capacities made available for cross-zonal trade (for 2024, data from 1 January to 30 June are considered). The lower bandwidth of the curve clearly illustrates how the German TSOs incrementally increased the capacity offered to the market each year in order to meet the CEP70 minimum requirement.

In contrast, ACER communicated in its annual reports as well as in its Opinion 02/2024 of 10 April 2024 that reaching the CEP70 requirement is still in the far future. The Agency comes to such conclusion because it primarily focuses on the achievement of the final target value of 70 %. This overlooks the fact that most Member States currently have an action plan or derogation, which means that the applicable requirements are still below 70 %. Benchmarking on the basis of the 70 % - as ACER does in its annual report - does not provide meaningful results, as this value is not applicable yet in many countries. On the contrary, it may even be misleading to do so. In the case of Germany, it can be observed that

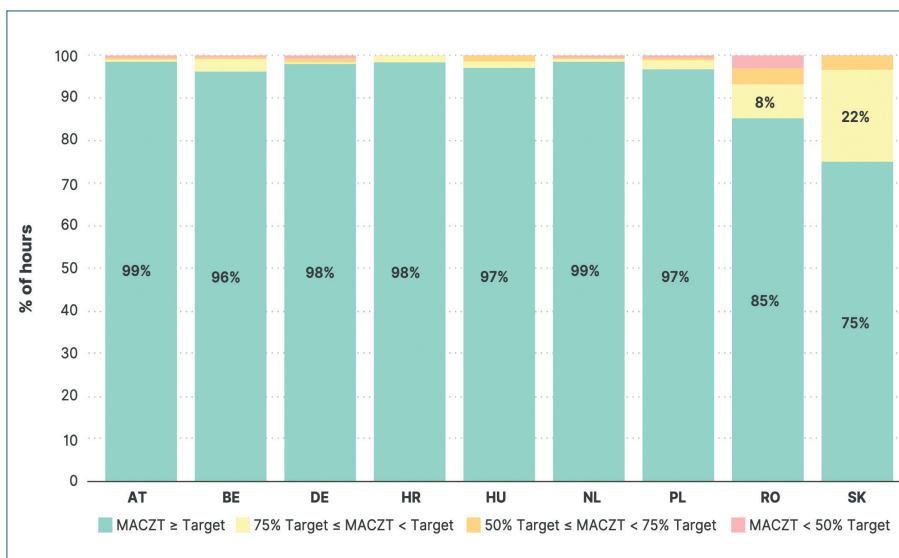


Figure 3 Percentage of hours where the interim capacity requirements were met in all CNECs in the Core capacity calculation region per Member State with action plan and/or derogation in 2023 (% of hours)

Source: ACER (2024): Transmission capacities for cross-zonal trade of electricity and congestion management in the EU, see Figure 19 on p. 29

cross-border capacities have been successfully increased every year according to the linear trajectory. It is noteworthy that ACER also benchmarks today's CEP70 interim requirements based on Member States' action plans and/or derogations approved by NRAs. However, this assessment is not really discussed in detail by ACER, although it shows that applicable requirements are currently largely met. The ACER assessment of the interim target for CCR Core in 2023 is shown in Figure 3 below.

The objective of ACER's market monitoring is to identify barriers to cross-zonal trade. For the time being, the action plans in force in some countries must be recognized as measures to overcome said barriers.

German TSOs call for an objective and diligent assessment of the German Action Plan

The most important pillar of the German action plan is to increase internal transmission capacity in order to reduce congestions. New high-voltage direct current assets will contribute to more efficient system operation. The fact that many transmission projects have benefited from faster regulatory approval in the recent past gives cause

for optimism regarding the success of the German action plan. However, it is important to point out that costly remedial actions are a legitimate means of bridging the time until these assets are available to the European electricity market. The successful implementation of the German action plan will bring many benefits to the European electricity market and the large and liquid German single bidding zone in the geographical center of the European Union.

We recognize the efforts and the contributions of the Agency monitoring of the European action plans. Still a truly fair and objective assessment of the German action plan is of utmost importance. It is worth discussing whether the approach recommended by the Agency paints a realistic picture of the capacity made available to the market and whether it potentially disregards the significant progress made to date. On 3 July 2024, ACER published its monitoring report entitled "Transmission capacities for cross-zonal trade of electricity and congestion management in the EU". This report was preceded by a formal opinion to the European Commission and the European Parliament, which was published on 10 April 2024. The ACER report and the national compliance monitoring demonstrate that

Germany is fulfilling the interim targets from the linear trajectory and is hence on track to fulfil its action plan. Nevertheless, ACER's reports and its opinion criticize that the CEP70 requirement will not be met from 2026 by all Member States. The German TSOs look forward to intensifying discussions on how to improve cross-border trading opportunities given the great responsibility we bear for the functioning of the European electricity transmission network.

Sources

- [1] cf. ACER (2024): Transmission capacities for cross-zonal trade of electricity and congestion management in the EU.
- [2] cf. ACER (2024): Opinion No. 02/2024 of 10 April 2024, Point 14.
- [3] cf. ACER (2019): Recommendation 01/2019 of 8 August 2019 on the implementation of the minimum margin available for cross-zonal trade pursuant to Article 16(8) of Regulation (EU) 2019/943.

*M. Drerup and M. Hermann, TenneT TSO GmbH, Bayreuth; B. Höflich, 50Hertz Transmission GmbH, Berlin; J. Huxoll, Amprion GmbH, Dortmund; K. Seiter and A. Weigel, TransnetBW GmbH, Stuttgart
Contact: justus.huxoll@amprion.net*

NEWS | MAGAZINE | JOBS | MARKTPARTNER | TERMINE

EURO HEAT & POWER
Wärme, Kälte, Kraft-Wärme-Kopplung

www.ehp-magazin.de

Fachinformationen zur Wärmeversorgung

Im Online-Verbund mit **eVergie.de**