



Agency for the Cooperation
of Energy Regulators

Public Consultation on the Methodology and assumptions that are to be used in the bidding zone review process and for the alternative bidding zone configurations to be considered

in accordance with Article 14(5) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity

This consultation is addressed to all interested stakeholders.

Replies to this consultation should be submitted by **15 April 2020, 23:59 hrs (CET)**.

Questions should be addressed to ACER at: ACER-ELE-2020-001@acer.europa.eu

Introduction

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*Is your input into this consultation confidential?

NO

☐

YES

☐

NO

ACER will publish all non-confidential responses.

ACER will process personal data of the respondents in accordance with Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, taking into account that this processing is necessary for performing ACER's consultation task. For more details on how the contributions and the personal data of the respondents will be dealt with, please see ACER's Guidance Note on Consultations and the specific privacy statement attached to this consultation.

Context

Objectives

This consultation aims to gather views and information from stakeholders on the methodology and assumptions and for the alternative bidding zone configurations to be considered for the bidding zone review process, pursuant to Article 14(5) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity.

Specifically, the consultation follows the proposal (the 'Proposal') developed in accordance with this article. The latest version of this Proposal was submitted by TSOs on 18 February 2020. The consultation further focuses on areas for improvement of the Proposal identified by the European Union Agency for the Cooperation of energy regulators ('ACER').

ACER will use the input from the consultation to inform the decision-making process on the approval of the Proposal, the responsibility of which currently lies with regulatory authorities.

Related documents

- [Regulation \(EU\) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators \(recast\)](#)
- [Regulation \(EU\) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity \(recast\)](#)
- [Commission Regulation \(EU\) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation \(EC\) No 714/2009 of the European Parliament and of the Council Text with EEA relevance](#)
- [All TSOs' proposal for the methodology and assumptions that are to be used in the bidding zone review process and for the alternative bidding zone configurations to be considered in accordance with Article 14\(5\) of Regulation \(EU\) 2019/943 of the European parliament and of the Council of 5th June 2019 on the internal market for electricity](#)
- [ACER Guidance Note on Consultations](#)

Legal background

Pursuant to Article 14(5) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, ENTSO-E, on behalf of all TSOs, published and submitted

to regulatory authorities on 7 October 2019 a proposal. Regulatory authorities identified shortcomings. In particular, the proposal did not include any alternative bidding-zone configuration for Central Europe. Regulatory authorities requested that TSOs amend the proposal before 20 February 2020. [ENTSO-E, on behalf of all TSOs, published and submitted to regulatory authorities on 18 February 2019 an amended proposal.](#)

Taking stock of lessons learnt from previous bidding zone reviews (including the most recent one, within Italy), ACER is gathering views from stakeholders in an attempt to identify improvements to the proposed bidding zone review methodology, assumptions and configurations. The consultation is intended to support on-going regulatory discussions prior to the adoption of the methodology.

The consultation is divided into two parts. The first one refers to the methodology itself, while the second part refers to the study of alternative configurations.

1. Bidding zone review: Methodology

Pursuant to Article 14(5) of Regulation (EU) 2019/943 TSOs and regulatory authorities must review bidding zones. The review must identify all structural congestions and include an analysis of different configurations of bidding zones in a coordinated manner with the involvement of affected stakeholders from all relevant Member States, in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

The review must assess current bidding zones on the basis of their ability to create a reliable market environment, including for flexible generation and load capacity, which is crucial to avoid grid bottlenecks, balance electricity demand and supply, and secure the long-term investments in network infrastructure. Article 33 of the CACM Regulation establishes a list of minimum criteria that shall be considered when performing the bidding zone review and therefore expected to be included in this ‘Proposal’. In light of these requirements and the experienced gained in the previous bidding zone review, the following aspects of the methodology are consulted: i) the Pan-European consistency of the methodology, ii) the level of transparency and stakeholders’ engagement, iii) the need to ensure a conclusive bidding zone study, and iv) the level of detail, quality and relevance of the methodology.

Topic 1: Pan-European consistency of the methodology

A bidding-zone review methodology must take account of existing regulatory work on the topic, and the reality of the European network, while achieving the necessary standard of European harmonisation.

1.1.1 Please rate your degree of agreement or disagreement with the following statements: 1- Strongly disagree; 2- Disagree; 3- Neither agree nor disagree; 4- Agree; 5- Strongly agree.

	1	2	3	4	5
1. The assumptions and the methodology for the bidding-zone review must remain pan-European to the extent possible. Further consistency between regions must be ensured in the methodology included in the Proposal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. While the proposal may accommodate regional aspects when duly justified, pan-European principles that aim to maximise European welfare should be ensured, e.g. concerning capacity calculation principles. In this regard, the methodology should be consistent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

with recommendations and decisions of ACER regarding capacity calculation (e.g. the [ACER Recommendation on capacity calculation](#) and the [ACER decision on the Core capacity calculation methodology](#)).

1.1.2. Please detail below which aspects of the Proposal adequately ensure overall pan-European consistency of the bidding-zone review methodology and **should therefore be retained** in the final methodology.

1.1.3. Please detail below which aspects of the Proposal hamper overall pan-European consistency of the bidding-zone review methodology, and **should therefore be amended** in the final methodology.

1.1.4. Please add any comment on the need to ensure pan-European consistency.

We support the all TSOs statement, as submitted in another particular answer.

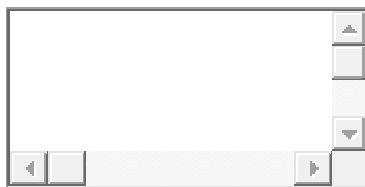
Topic 2: Transparency and stakeholders' engagement

In the context of a bidding zone review, aimed at assessing existing bidding zones against possible ones in order to better ensure the abovementioned objectives, Article 14(3) of Regulation (EU) 2019/943 sets that the review should involve '*affected stakeholders from all relevant Member States*'.

1.2.1 Please rate your degree of agreement or disagreement with the following statements: 1- Strongly disagree; 2- Disagree; 3- Neither agree nor disagree; 4- Agree; 5- Strongly agree.

	1	2	3	4	5
1. Maximum transparency must be guaranteed at all stages of the bidding zone review. In particular, all data, assumptions and relevant parameters used in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

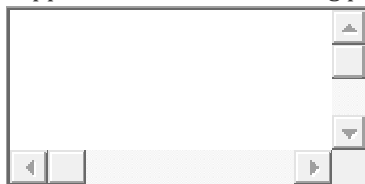
	1	2	3	4	5
1. Quantifiable, possibly monetised criteria should be the focus of the bidding zone review.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The assumptions and data used as inputs for the bidding zone review should be, as much as possible, checked against reality; the methodology should be based on realistic expectations about the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. While methodological simplifications may be necessary to enable a timely delivery of the bidding zone study, they should not decrease the quality and relevance of the underlying analysis and indicators. In general, methodological simplifications should be sought when they are not expected to impact the results of the study.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. The current TSOs' proposal to assess market liquidity mainly focuses on possible changes of liquidity in day-ahead markets. While liquidity of day-ahead markets is important, an assessment of liquidity impacts across all timeframes should be included. In particular additional indicators to capture the impact of a bidding zone reconfiguration on forward markets liquidity in a holistic manner should be considered.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. In the first bidding zone review pursuant to CACM, significant efforts were put in simulating cross-zonal capacity calculation in a very detailed manner. In view of the 70% minimum target of cross-zonal capacity envisaged in the CEP, which will be taken into account in the bidding zone review, the role of capacity calculation may be less crucial than in the first bidding zone review. As a consequence, some simplifications in simulating cross-zonal capacity calculation should be envisaged, which would allow to increase the efforts on other important aspects of the review.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. The current TSOs' proposal for the simulation of short-term welfare effects seems to exclusively rely on the changes in generation dispatch and related costs, while demand-side response is mostly disregarded. Given that a bidding zone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



1.3.5 Please specify how specific the final recommendation of the TSOs should be:

- ☐ TSOs should specify whether the bidding zone configuration should be maintained or changed and in case of the latter, specify their preference for one alternative bidding zone configuration.
- ☐ TSOs should specify whether the bidding zone configuration should be maintained or changed and then present a number of possible options, highlighting the benefits and shortcomings of different options, subject to the considerations of other aspects (e.g. implementation timeline, minimum 'lifetime' of the alternative bidding zone configuration to ensure the benefits exceed the transitional costs, measures to mitigate certain impacts, etc.).
- ☐ Other possible ways of presenting the final recommendation.

1.3.6. Please add any comment on the topic of ensuring a conclusive bidding zone review, which adequately supports the decision making process.



We support the all TSOs statement, as submitted in another particular answer.

2. Definition of alternative Bidding Zone configurations

The definition of alternative bidding zone configurations to the existing ones has proven a difficult aspect of the Proposal. In particular, the Proposal does not include any alternative bidding zone configuration for Central Europe.

2.1 According to the Article 14(1) of Regulation (EU) 2019/943, "*Bidding zone borders shall be based on long-term, structural congestions in the transmission network.*" Moreover, the same article mentions that "*The configuration of bidding zones in the Union shall be designed in such a way as to maximise economic efficiency and to maximise cross-zonal trading opportunities in accordance with Article 16, while maintaining security of supply.*"

In order to delineate bidding zones, there are at least two possible approaches. A first approach is a top down (expert-based) one, whereby experts propose alternative bidding zone delineations, which could potentially yield more efficient outcomes than the current bidding zone configuration (the status quo). A second approach is a bottom up one (model-based) where locational marginal pricing (LMP) simulations are performed with a view to clustering nodes (e.g. based on similar marginal prices) into bidding zones. TSOs informed ACER that persisting problems with data input and modelling impede the possibility of using model-based approaches for the upcoming bidding zone review.

Given the above and the difficult to reach agreements, configurations were not submitted for several regions, including regions where structural congestions persist. In view of this, an expert-based approach (possibly supported by some elements of modelling) seems the main option available to propose bidding zone configurations for the upcoming bidding zone review. In the absence of a model-based option, ACER believes that some quantitative aspects should still be considered when considering alternative bidding zones, namely:

- An identification of the network elements, which are more frequently congested and lead to costly remedial actions the most.
- An identification of the geographical areas (bidding zones) which contribute the most to congestion on network elements. These areas could be a bidding zone where the congested element is located (in case of congestions caused by internal exchanges mainly) or other bidding zone (in the case of loop flows).
- (If available), a LMP simulation to support the expert-based delineation of bidding zones (e.g. to confirm, refine and/or prioritise the delineation of the previously defined expert-based configurations).

Please provide your views on the relevance of the above-proposed principles, which aim to support an expert-based delineation process.

We support the all TSOs statement, as submitted in another particular answer.

2.2 The Proposal envisages a locational marginal pricing (LMP) simulation as an optional element of the bidding zone review.

2.2.1 Should a LMP simulation be a mandatory element of this bidding zone review?

- ☐ Yes
- ☐ No

2.2.2 Should a LMP simulation be used as an input for proposing alternative bidding zone configurations?

- ☐ Yes
- ☐ No

2.2.4 Please indicate other possible benefits of including a mandatory LMP simulation during the bidding zone review

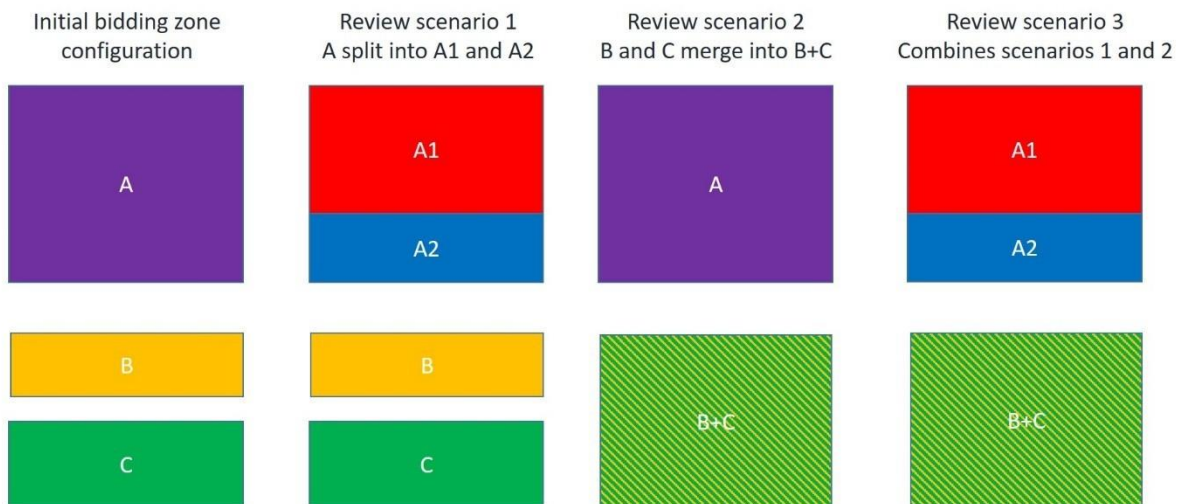
We support the all TSOs statement, as submitted in another particular answer.

2.3 When proposing bidding zone configurations, do you see the need to ensure that the incremental effects of combined bidding zone configurations are identified (see the example below)? Please, provide your views on possible pros and cons of such an approach.

We support the all TSOs statement, as submitted in another particular answer.

In the following example, from three existing bidding zones A, B and C, experts assess the split of a bidding zone “A” into bidding zones “A1” and “A2”, as well as the merger of bidding zones B and C. To assess potential incremental effects, the following three alternative configurations should be analysed:

1. Split into A1 and A2 only
2. Merger of B and C only
3. Split into A1 and A2 in combination with the merger of B and C



2.4 Which other criteria should in your view be considered when proposing alternative bidding zone configurations?

We support the all TSOs statement, as submitted in another particular answer.

Conclusion

3. Please provide any further comment

General remark:

We appreciate the cooperative work regarding the bidding zone review and the all TSOs' proposed methodology elaborated within ENTSO-E. We support all the statements mentioned in the all TSOs' answer to this public consultation. In addition, we would like to complement it with some remarks highlighting some national specificities, as in Germany we are already in the middle of the energy transition, which, according to the TYNDP, goes hand in hand with higher planned/needed grid investments than in any other member states.

Summary:

First, we would like to emphasize that a refinement of the CACM criteria for a bidding zone review may be needed, as they have been defined and adopted in a period before the Green Deal discussion. In view of the current European focus on CO₂ emission and climate neutral targets, the assessment should give highest priority to the impact of adjusted bidding zone configurations on the achievement of these European targets. For this purpose, the examination of bidding zone configurations should especially consider the integration of renewable energy systems as well as the effects on CO₂ emissions, even if these are not explicit CACM requirements.

We would like to highlight that the investigation of system costs, especially related to the integration of renewable energy systems (RES), and market costs should have the same relevance as redispatch costs. Additionally, we would like to underline the importance of the consideration of market liquidity (as it is, beside many other effects, key for an efficient RES integration) and its monetization in the analysis (even if this is a challenging task). Besides market liquidity, another important criterion is the stability and robustness of bidding zone configurations, which greatly influence uncertainty for investors (especially in RES) who are known to be risk averse and therefore probable to demand additional risk premiums if the bidding zones are likely to be frequently reconfigured. In addition, all aspects of transition costs should be taken into account in order to assess whether redesigning the bidding zone configuration will result in a net welfare gain. More details are provided below (under section "More details and clarifications on the points above"), taking into account our experience of the German grid.

Moreover, we believe that in order to fully support the European ambitions, the decision concerning an alternative bidding zone configuration should be based on a comprehensive analysis beyond a short-limited time-period or single scenario. We understand that the CEP requires the analysis of a period of at least one year on a 3-year ahead horizon (y+3). However, it should be also taken into account that the CACM guideline requires the inclusion of scenarios which consider a range of likely infrastructure developments throughout a period of 10 years. In any case, the final recommendation concerning the optimal bidding zone configuration should

contemplate specific aspects aligned with European targets. Particularly regarding the German case, considering the strongly needed and enormous planned grid investments, as well as the comprehensive energy system change to become CO₂ neutral, the analysis of a single scenario or simulation year does not allow for a thorough conclusion. Congestions along potential new configuration borders would very likely disappear or move to another area in the following years due to the constant optimization and expansion of the German grid. Therefore, in order to assess whether bidding zone configurations are robust to upcoming network development, we would like to insist on the necessity to consider several scenarios for the bidding zone review at least by means of sensitivities as suggested in the proposal for the BZR methodology drafted by the TSOs.

Finally yet importantly, in case ACER decides to investigate alternative configurations in the Bidding Zone Review Region Central Europe, we would like to emphasize the necessity that these configurations should reflect the European scope of the review and not to focus on individual countries separately.

More details and clarifications on the points above:

Given ACER's focus on redispatch costs, we became concerned about a possible imbalance of the evaluation of different costs, considering that other system and market aspects are of equal relevance. Furthermore, the effects on the energy transition and the market for renewable systems (impacts on RES costs and total energy turnaround) should be considered in the assessment of alternative bidding zone configurations: systems with high penetration of intermittent renewable energy, such as wind and PV, have electricity production mainly driven by local weather conditions; consequently, smaller bidding zones with very high penetration of intermittent renewables would have a significant amount of hours during the year in which negative electricity prices occur. Firstly, this would lead to very high transfer payments, e.g. under the current market premium regime in Germany (possible increase on top of the already high payments of about €26 billion per year in 2020, according to the prognosis of the German EEG-Umlage 2020 – see slides 8 and 15 of the document: <https://www.netztransparenz.de/portals/1/2019-10-15%20Ver%c3%b6ffentlichung%20EEG-Umlage%202020.pdf>). Secondly, already planned or realized RES projects could suffer a massive negative impact (e.g. the cancellation of large wind-offshore projects seems very plausible), as they have been awarded on different expectations regarding market prices in the tendering procedure. Considering that Germany has already more than 120 GW of installed RES and more than 200 GW planned to be installed, financial risks for renewable systems should be avoided. Inadequate bidding zone configurations could not only lead to very high costs for existing RES, but also significantly endanger the expansion and development of future renewable energy systems. In order to successfully achieve the proposed European CO₂ targets, efficient integration of renewable energy systems and a reliable framework for investments of such systems is necessary. Therefore, an impact assessment of overall system costs is essential, while conclusions taken mainly based on redispatch costs can be premature and possibly underestimate significant risks.

The integration of more RES, necessary for the achievement of the proposed European CO₂ targets, leads to the need of grid expansion, independently of the bidding zone configuration. Considering the investment sums and construction time plans of such projects, distributed across

several years and the extensive lifetime of grid elements, limiting the analysis in the bidding zone review to a single scenario is improper to represent reality. With the aim to achieve a comprehensive study, it is crucial for the methodology to consider not only Pan-European consistency, but also relevant regional specificities, especially related to grid expansion. As part of the needed system transformation to support the energy transition, German TSOs will invest around €80 billion in network expansion until 2030 (as stated in the German Action Plan, according to Art. 15 of Regulation (EU) 2019/943). Germany's renewable energy generation (around 120 GW) represented more than 50% of production in the first trimester in 2020 and is planned to be further expanded to more than 200 GW. Considering the current relevant planned investment on German grid infrastructure, the analysis of the potential benefit of alternative bidding zone configurations before the completion of ongoing projects is highly questionable. We want to highlight, that a thorough analysis should allow for evaluating not only one focus year. In the German case, we see three important time horizons:

- Short-Term (up to 2024): Congestions in the German grid are prominent, considering the nuclear phase-out and HVDC projects still in the planning phase. These expected congestions are the reason for ongoing large AC grid reinforcement and expansion projects.
- Mid-Term (2024-2030): A significant reduction of congestions is expected due to the ongoing HVAC and HVDC grid expansion projects (e.g. commissioning of Ultranet in 2024 followed by the other large HVDC projects), the gradual coal phase-out and the implementation of transmission line temperature monitoring systems as well as PSTs.
- Long-Term (after 2030): An (already now starting) assessment of whether the proposed climate and CO₂ goals are reached with the currently planned grid expansion projects should be then performed, considering that we might face then new challenges.

The timeframe of the BZR methodology shall therefore be compatible with the establishment of measures that contribute to the reduction of grid congestion combined with crucial actions foreseen in the member states for the European CO₂ targets achievement and the successful implementation the European Green Deal.