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Public consultation on the high-level approach for the identification of alternative bidding zone configurations to be considered for the bidding zone review

Fields marked with * are mandatory.

This consultation is addressed to all interested stakeholders.

Replies to this consultation should be submitted by **3 August 2021, 23:59 hrs (CET)**.

Questions should be addressed to [ACER-ELE-2020-001@acer.europa.eu.](mailto:ACER-ELE-2020-001@acer.europa.eu)

Contact information

* First Name

[redacted]

* Last Name

[redacted]

* Company / Institution

German Federal Ministry for Economic Affairs and Energy

Affiliation

Other (e.g. Power Exchanges, Storage Operator, etc)

If other, please specify

Government

Address

* Email

[redacted]

Contact phone

Country

DE - Germany

☑ I confirm that I have read the data protection notice in this link and accepted.

* Is your input into this consultation confidential?

- ○ Yes
- ● No

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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 ('ACER Regulation')
- Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) ('Electricity Regulation')
- Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management ('CACM Regulation')
- Regulation (EU) 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 Decision 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 (ACER Decision 29-2020)

- ACER Guidance Note on Consultations

Introduction

This consultation aims to gather views and information from stakeholders on the high-level approach for the identification of alternative bidding zone (BZ) configurations to be considered for the bidding zone review (BZR) 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 ('The Electricity Regulation').

This consultation follows the one launched in April 2020, whose scope was to gather views and information from stakeholders on selected aspects of the proposal developed in accordance with the above-mentioned article.

The definition of alternative BZ configurations has proven a difficult aspect of the proposal. In particular, the proposal did not include any alternative BZ configuration for Central Europe. In light of the insufficient technical information available for ACER to take an informed decision on alternative BZ configurations, with its Decision 29-2020 (the 'Decision'), issued on 24 November 2020, ACER adopted a pan-European BZR methodology and requested Transmission System Operators (TSOs) to carry out a Locational Marginal Pricing (LMP) simulation. Based on the results of this LMP simulation, ACER will be able to take a separate decision on alternative BZ configurations at a later stage.

When it comes to delineating BZs, there are at least two possible approaches. A first approach is a top-down (expert-based) one, whereby experts propose alternative BZ delineations, which could potentially yield more efficient outcomes than the current BZ configuration (the status quo). Based on available data and, whenever feasible, by performing certain market/network simulations, those alternative delineations are then confirmed or refined and finally prioritised. A second approach is a bottom-up (model-based) one, whereby LMP simulations are performed with a view to clustering nodes into BZs. Subject to certain delineation constraints, the clustering exercise yields alternative BZ configurations. By requesting TSOs to perform a LMP simulation, ACER intends to adopt a model-based approach for identifying alternative BZ configurations, as further elaborated in this document.

Taking stock of lessons learnt from previous BZRs, ACER is gathering views from stakeholders in an attempt to identify improvements to the high-level approach for the identification of alternative BZ configurations to be considered for the BZR.

In the following, the context of this public consultation is first presented. Subsequently, the general approach is described and the detailed process explained in detail. At the end, the questions for consultation are listed.

Context

Background

Pursuant to Article 14(5) of the Electricity Regulation, ENTSO-E, on behalf of all TSOs, published and submitted to regulatory authorities on 7 October 2019 a proposal for the methodology and assumptions that are to be used as well as for the alternative BZ configurations to be considered for the BZR process. Regulatory authorities identified shortcomings in the proposal. In particular, the proposal did not include any alternative BZ 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 2020 an amended proposal. By letter of 13 July 2020, the Chair of the Energy Regulators' Forum, on behalf of all regulatory authorities, informed ACER that they were unable to reach a unanimous decision on all TSOs' updated BZR proposal and that the updated BZR proposal was considered as referred to ACER as of 7 July 2020, pursuant to Article 14(5) of the Electricity Regulation.

With its Decision 29-2020 (the 'Decision'), issued on 24 November 2020, ACER decided on the BZR proposal as far as the methodology and assumptions for the BZR process are concerned and adopted a pan-European BZR methodology, referring the decision on alternative BZ configurations to a later stage.

Legal framework

Pursuant to Article 14(1) of the Electricity Regulation, "*Bidding zone borders shall be based on long-term, structural congestions in the transmission network. Bidding zones shall not contain such structural congestions unless they have no impact on neighbouring bidding zones or, as a temporary exemption, their impact on neighbouring bidding zones is mitigated through the use of remedial actions and those structural congestions do not lead to reductions of cross-zonal trading capacity in accordance with the requirements of Article 16. 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 addition, Article 33 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management ('the CACM Regulation') includes a list of minimum criteria that the BZR shall consider.

While the BZR study has to consider all the criteria listed in the CACM Regulation, the following three elements are explicitly mentioned in the Electricity Regulation as objectives to be pursued when delineating BZs. Moreover, these three elements can be quantified and, as such, more efficiently compared. These elements are:

- Minimisation of structural congestions within BZs;
- Maximisation of economic efficiency;
- Maximisation of cross-zonal trading opportunities.

A fourth element mentioned in the Electricity Regulation is security of supply, which is difficult to quantify during the identification of alternative BZ configurations. This element will however be considered during the BZR study as envisaged in the CACM Regulation.

General approach

The approach to identify alternative BZ configurations depends on the available data.

As reported in paragraph 150 of the Decision, results derived from LMP simulations are adequate to inform on the decision on alternative BZ configurations and in particular on the three objectives derived from Article 14(1) of the Electricity Regulation.

With regard to the objective 'Minimisation of structural congestions within BZs', LMP simulations shed light on whether BZs contain structural congestions or not. In particular, LMP simulations, together with clustering and flow decomposition techniques, allow establishing a cause-effect relationship between physical congestions and the network areas that, by exchanging energy, significantly contribute to such congestions. This is in line with Article 2(4) of the Electricity Regulation that describes congestion as "*a situation in which all requests from market participants to trade between network areas cannot be accommodated because they would significantly affect the physical flows on network elements which cannot accommodate these flows*". How the results of the LMP simulations and clustering techniques can be combined to identify the relevant network areas contributing to congestions is further described in the following section.

With regard to the other two objectives to be pursued when delineating BZs:

- Maximisation of economic efficiency: The results derived from LMP simulations provide a good opportunity to incorporate the economic efficiency criterion in the identification of alternative BZ configurations. While economic efficiency will be more accurately modelled in the BZR study itself, it is possible to use a proxy for economic efficiency when defining alternative BZ configurations. For example, a more efficient dispatch is expected to be attained when there are no or very limited nodal price differentials within a BZ. This is because the absence of nodal price differentials suggests that intra-zonal congestions are not expected to severely constrain the results of the market.

- Maximisation of cross-zonal trading opportunities: First, the minimum 70% target introduced in Article 16(8) of the Electricity Regulation is a binding requirement to be satisfied as of 1 January 2026, which could lead to a BZ change if not met, pursuant to Article 15(5) of the Electricity Regulation. Second, such minimum target is easier to meet when the flows that do not result from capacity allocation, i.e. loop flows and internal flows, consume a relatively small share of the capacity of network elements. In this context, a flow decomposition analysis is an adequate tool to identify whether alternative BZ configurations are able to limit the amount of flows that do not result from capacity allocation and to achieve the legally required targets.

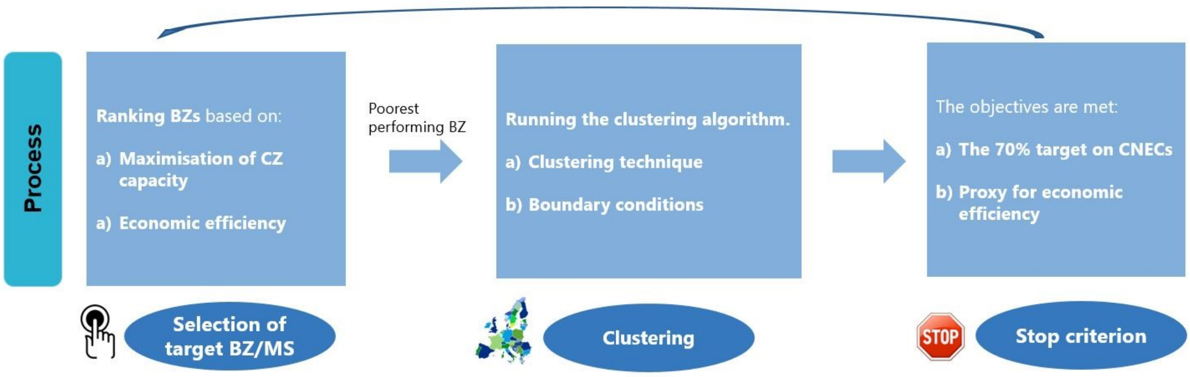
As a summary, results derived from LMP simulations, complemented with flow decomposition analyses, will be used to assess whether different alternative BZ configurations contribute to the objectives envisaged in the Electricity Regulation for the design of BZs. This includes the presence, or the lack thereof, of structural congestions within BZs and the maximisation of economic efficiency and cross-zonal trading opportunities.

In the following, the detailed process leading to the definition of alternative BZ configurations is presented.

Detailed process

The process proposed to identify alternative BZ configurations is an iterative one that comprises three steps: i) the selection of the target BZ/Member State (MS), ii) the clustering and iii) the stop criterion, as presented in Figure 1. An additional fourth step that is not part of the iterations is also required to combine the identified individual alternative BZ configurations to study their joint impact. For the sake of clarity, an individual BZ configuration refers to e.g. the split of a given BZ A into two BZs A1 and A2, while an alternative BZ configuration may consider the joint impact of such split with another individual BZ configuration, e.g. the merge of BZ B and BZ C into a single BZ. This fourth step is described at the end of this section.

Figure 1 – High-level approach for the definition of alternative BZ configurations



The process is designed in such a way that each iteration focuses on one single BZ or one single MS, based on the ranking built in the first step (‘the selection of the target BZ/MS’), as further described below. This is an important feature of the process as it imposes the MS borders as a boundary condition to the process. In practical terms, this implies that both splits and mergers of BZs as alternative configurations are possible as long as the new BZ remains within existing MS borders, with the only exception of maintaining already existing BZs comprising more than one MS (essentially Germany and Luxembourg).

This choice does not exclude the possibility for mergers beyond MS borders in future BZRs. However, such a possibility is not considered for this BZR for the following reasons. First, in light of the Electricity Regulation, the main trigger and objective of a BZR is to address structural congestions and/or facilitate the attainment of the minimum 70% target. In view of the significant presence of congestions in Europe and the significant efforts still needed to meet the 70% target, it seems efficient to focus on configurations that help to meet this target. Second, it was found that it would be difficult to reach an agreement on which mergers to prioritise, if any, and to introduce specific arrangements that MS mergers would entail. Hence, as the number of configurations to be studied needs to remain limited, it is efficient to focus on alternative configurations for which an agreement is likely to be found.

The iterative process is conducted separately for each area where a joint LMP analysis is carried out by the TSOs. In the following, each step is presented in detail.

The first step, ‘the selection of the target BZ/MS’, aims to identify the BZ (or the MS to which the BZ belongs when several BZs belong to the same MS, as further elaborated below) that is selected in each step for the identification of alternative configurations in such BZ. Such identification is based on a ranking built on the following two indicators:

- Amount of burdening internal flows and loop flows per BZ on relevant network elements; and

- An indicator on economic efficiency, as further detailed below.

With regard to the first indicator, the amount of burdening internal flows and loop flows per BZ is derived from a flow decomposition analysis. An internal flow or a loop flow caused by a given BZ is considered to be burdening if it is in the same direction as the sum of all internal flows and loop flows on the considered network element. Flow decomposition is performed on all cross-zonal network elements as well as internal network elements used in capacity calculation, based on best available data and computational capabilities. This analysis covers the most recent three years (i.e. 2018, 2019 and 2020) of the latest ENTSO-E's technical report on structural congestions and other major congestions as well as the target year of the BZR, i.e. 2025. The lower the amount of burdening internal flows and loop flows on network elements originated in a given BZ, the higher the BZ scores with regard to this indicator.

With regard to the second indicator, different indicators, which can be used as a proxy for economic efficiency, are currently being considered. An example of this could be the dispersion of nodal prices. In such a case, the lower the dispersion of nodal prices in a given BZ, the higher the BZ scores with regard to this indicator.

Then, BZs are first ranked according to each of the two indicators and then a single ranking is built by combining the positions of each BZ in both rankings, while considering that the two proposed indicators are equally important for the purpose of the aggregated ranking. At each iteration, the geographic area where alternative BZ configurations are investigated is the BZ which performs the worst in the aggregated ranking. If the MS already includes multiple BZs, the identification of alternative BZ configurations for the MS as a whole may be investigated. This allows the possibility of considering mergers of BZs within MSs that currently comprise more than one BZ. When a MS with multiple BZs is selected for the first time in step 1, then the algorithm would seek to identity two BZs within the MS. If the MS is selected again in a subsequent step 1, then the algorithm would seek to identify three BZs within the MS and so on.

The second step corresponds to the application of a clustering algorithm, aiming to group nodes into BZs. Additional considerations regarding this step are as follows:

- First, this step is based on the results of the LMP simulations, which is solely conducted for the target year of the BZR, i.e. 2025.

- Second, currently two types of clustering methods, namely graph-based and constrained clustering, are being considered for the selection of the most adequate clustering algorithm. The final selection will depend on the outcome of the consultancy study on the matter.

- Third, the identification of sub-BZs within a BZ is subject to an additional boundary condition: the size, in terms of total generation and consumption of the newly identified BZs, should not be too different. This is needed to mitigate the issue related to the so-called flow-factor competition that could arise in case of very diverse BZ sizes.

The third step, the ‘stop criterion’, aims to determine whether the iterations for the identification of additional BZ configurations should continue or not. In line with the objectives envisaged in the Electricity Regulation, the iterations stop when the following two targets are simultaneously met:

- For all the considered network elements and market time units, the share of internal flows and loop flows taken together is lower than or equal to 23% of the thermal capacity of the network element. This value is obtained by assuming a 10% share for reliability margins and a contribution of this share in the ratio 20/70 to internal flows and loop flows.

- The indicator used as a proxy for economic efficiency reaches the target for all considered BZs. For example, if the dispersion of nodal prices is considered as a proxy, the target would be set to a residual value.

If, after each iteration, the stop criteria are not met, then the process restarts from step 1, to identify a new BZ to be selected for the identification of alternative configurations in such BZ. For each step, a new list of BZs is used as an input. Such list comprises: i) the BZs of the status quo, except those that were altered in previous iterations and ii) the BZs proposed in any of the previous steps. For MSs with multiple BZs, the BZs to be considered in each step are the ones identified during the latest iteration when the MS was selected in step 1.

The fourth and final step concerns the combination of the identified alternative BZs into alternative configurations to be studied. A list of maximum 10 alternative configurations per bidding zone review region is envisaged. This list includes a limited number of:

- Individual alternative BZ configurations;

- Combination of two individual alternative BZ configurations;

- Combination of three (or more) individual alternative BZ configurations

selected among all possible combinations of individual alternative BZ configurations that lead to the highest incremental improvements for the considered indicators.

Questions

Topic 1: Main objectives for the identification of alternative bidding zone configurations

Article 14(1) of the Electricity Regulation establishes that "*Bidding zone borders shall be based on long-term, structural congestions in the transmission network. Bidding zones shall not contain such structural congestions unless they have no impact on neighbouring bidding zones or, as a temporary exemption, their impact on neighbouring bidding zones is mitigated through the use of remedial actions and those structural congestions do not lead to reductions of cross-zonal trading capacity in accordance with the requirements of Article 16. 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".*

1.1. Do you agree that the identification of alternative bidding zone configurations should mainly seek the following three objectives: 1) Minimisation of structural congestions within bidding zones; 2) Maximization of economic efficiency and 3) Maximisation of cross-zonal trading opportunities?

at most 1 choice(s)

- [ ] Strongly disagree
- [ ] Disagree
- [x] Neither agree nor disagree
- [ ] Agree
- [ ] Strongly agree

1.2 Please provide any comments on the main objectives to be considered when identifying and prioritising alternative bidding zone configurations.

4999 character(s) maximum

A) Economic efficiency:

ACER proposes to consider LMP differentials within a given BZ as a proxy for “economic efficiency”. This proxy is employed when selecting BZs for reconfiguration (step 1) and for the stop criterion (step 3). In order to do so, ACER will need to define both a function to translate LMP differences into scores of economic efficiency for the selection process and a threshold to define whether the stop criterion is met.

This is troublesome for three reasons: First, LMP differentials as such are not informative about economic efficiency as they do not entail any information on the welfare effects of pooling or separating LMPs of different value. Second, LMP differentials in the day-ahead timeframe alone do not reflect the overall efficiency of the system, as other cost-influencing factors such as intraday price differentials or redispatch costs are ignored. Third, using LMP differentials as proposed by ACER will simply make the algorithm prefer small BZs over large BZs. The algorithm’s stopping point of dividing BZs into smaller units is technically determined by the definitions of the above-mentioned function and the threshold – both of which remain non-transparent in this consultation and are subject to ACER’s discretion.

Hence, setting up the algorithm like proposed will inherently optimize the European BZ configuration towards nodal pricing (or small BZs, depending on ACER’s stopping threshold) even though the European target model consists of zonal markets and allows for harmless amounts of redispatching. By definition, the algorithm will not propose larger bidding zones (i.e. mergers). This falls short of the BZRs overall goal to holistically evaluate alternative BZ configurations and could lead to economic inefficiencies being maintained in case zones are split despite low LMP differentials.

B) Structural congestions

Article 14(1) of the Electricity Regulation provides that BZs may contain structural congestions as long as they have no negative impact on neighboring BZs (permanently or temporarily mitigated through remedial actions) or do not lead to reductions of cross-zonal trading capacity in accordance with the requirements of Article 16. Article 16, in turn, establishes the 70% goal while allowing gradual increases towards this goal if actions plans are in place. ACER should remove the ‘minimization of structural congestions’ as a guiding criterion from the analysis, because EU law states that structural congestions are acceptable as long as the concerned MS comply with the 70% rule.

C) Reliable market environment

Article 14 (3) establishes, among others, that BZs shall be assessed on the basis of their ability to create a reliable market environment. ACER needs to adopt this criterion in the delineation of alternative BZ configurations by anticipating major changes to the grid topology in the short- and mid-term future. To this end, ACER should also consider LMP data from an additional target year, for example 2030, in order to find bidding zone configurations which are stable over a longer time period and thus ensure a reliable market environment.

Topic 2: Indicators for the selection of the target bidding zone/member state

To ensure that the objectives listed in Topic 1 are met, and based on the data available to ACER, the following indicators are proposed:

- The amount of internal flows and loop flows contributing to congestions, per bidding zone and on network elements included in capacity calculation, for the maximisation of cross-zonal trading opportunities; and

- The dispersion of nodal prices, i.e. assessing the level of homogeneity of nodal prices within the same bidding zone, for the maximisation of economic efficiency.

2.1. Do you agree with the proposed indicators?

at most 1 choice(s)

- [ ] Strongly disagree
- [x] Disagree
- [ ] Neither agree nor disagree
- [ ] Agree
- [ ] Strongly agree

2.2 In light of the objectives listed in Topic 1, please indicate other possible indicators for the selection of the target bidding zone/member state.

4999 character(s) maximum

A) Economic efficiency

For a critical review of ACER's implementation of the indicator "economic efficiency", see question 1.2.

B) Maximization of trading opportunities

The Ministry agrees that the amount of internal flows and loop flows contributing to congestions is a valid proxy for the maximization of trading opportunities. However, the proposed method is too simplistic, because it only relies on decomposition methods that merely (re)label electric flows but are incapable of capturing the market effect of new BZ configurations, that is, the change in dispatch due to altered market outcomes and the resulting changes in power flows. In ACER's model, market outcomes and physical flows do not change across different BZ configurations. It is only the label attached to a power flow (external, internal, loop flow) that changes.

Moreover, ACER states it would use historic (2018, 2019, 2020) and future (TYNDP 2025) data for the performance scoring in step 1 and potentially also for the stop criterion of step 3. First, it is inappropriate to use historic data to derive optimal alternative BZ configurations in the future. 2018 is eight years away from the target year, which is a very large time span with respect to changes in the grid topology. Second, historic and (modelled) future power flows will be different. ACER does not provide information on which of the data will be employed for calculating performance scores or evaluating whether the stop criterion is met. ACER should refrain from using historic data altogether.

Last but of utmost importance: The stop criterion is met if the share of internal flows and loop flows taken together is lower than or equal to 23% of the thermal capacity of cross-border relevant network elements (CNECs). This criterion is appropriate where the network element under consideration is fully utilized. However, in case there is idle capacity on the network element (i.e. the physical flow is smaller than its thermal capacity), the stopping threshold needs to be relaxed to a higher value accommodating more than 23% of internal flows and loop flows. ACER's proposal to ignore idle capacity stands in contrast with the Electricity Regulation, which allows internal and loop flows to assume higher shares than 23% (or 30%, depending on the treatment of the reliability margin) wherever possible without violating Art. 16 (8). Moreover, it challenges the common sense to downsize BZs for the sake of aligning the market with network constraints while ignoring free capacity on the relevant network elements. On a side note, if put in practice, reserving a 70% margin irrespective of actual usage would result in a systematic underutilization of the grid and be highly inefficient.

Topic 3: Boundary conditions for the clustering algorithm

The high-level approach is designed in such a way that each iteration focuses on one single bidding zone or one single member state, based on the ranking built in the first step ('the selection of the target bidding zone/member state'). In practical terms, this implies that both splits and mergers of bidding zones as alternative configurations are possible as long as the new bidding zone remains within existing member state borders, with the only exception of maintaining already existing bidding zones comprising more than one member state.

3.1. Do you agree that member state borders should be considered as boundary condition for the clustering algorithm?

at most 1 choice(s)

- [x] Strongly disagree
- [ ] Disagree
- [ ] Neither agree nor disagree
- [ ] Agree
- [ ] Strongly agree

3.2 Please indicate other possible geographical boundary conditions for the clustering algorithm, including pros and cons of such approach.

4999 character(s) maximum

There is no provision in the Electricity Regulation or CACM to maintain MS borders when defining alternative BZ configurations. If economic efficiency really is one of the key criteria for reconfiguring the boundaries of Europe's power markets, mergers across MS borders need to be allowed. In combination with the condition of homogeneity in size, precluding cross-border mergers mechanistically drives the proposal for reconfiguration towards a set of BZs across Europe, in which each BZ will have a size of today's smallest BZ, or less.

We strongly encourage ACER to relax this condition in order to allow the algorithm to detect truly optimal, i.e. economically efficient, reconfigurations. This can be achieved either by dropping the constraint altogether or, if considered necessary, restrict it to the larger geographical units of capacity calculation regions.

An additional boundary condition of the clustering algorithm is introduced, according to which the size, in terms of total generation and consumption of the newly identified bidding zones, should not be too different. This is needed to mitigate the issue related to the so-called flow-factor competition that could arise in case of very diverse bidding zone sizes, as further elaborated below. The competitive position of one bidding zone with respect to the others in the access to cross-zonal capacity is determined by the zonal Power Transfer Distribution Factors (PTDFs). A so-called flow-factor competition issue arises whenever zone-to-zone PTDFs between two bidding zones are systematically larger than between any other pair of bidding zones. In those circumstances, the concerned bidding zones have fewer chances to access the available cross-zonal capacity and, under scarcity circumstances, this could in turn lead to security of supply issues.

3.3. Do you think that having bidding zones with homogenous size in terms of total generation and consumption should be an objective when identifying alternative bidding zone configurations?

at most 1 choice(s)

- [ ] Only for newly-defined bidding zones
- [ ] Always
- [x] Never

3.4 Please provide any comments on this boundary condition.

4999 character(s) maximum

Neither the Electricity Regulation nor CACM mentions homogeneity of the sizes of BZs as a relevant indicator. This is because size in terms of generation capacity and demand for electricity in itself is not a meaningful indicator for choosing welfare-optimal BZ configurations. Especially with increasing shares of non-firm renewable energy, the size of generation capacity provides no useful information with regard to the homogeneity of BZs.

Similar to the reasoning above, the boundary condition of homogenous BZs could contradict ACER's objective to achieve economic efficiency, as new BZ configurations which the model identifies to be economically efficient may not be homogeneous in size.

In combination with the geographical boundary restriction of national borders, the condition of homogeneity in size will mechanistically drive the proposal for reconfiguration towards a set of BZs across Europe, in which each BZ will have a size of today's smallest BZ, or less.

Topic 4: Combination of identified individual alternative bidding zone configurations to study their joint impact

An individual bidding zone configuration refers to e.g. the split of a given bidding zone A into two bidding zones A1 and A2, while an alternative bidding zone configuration may consider the joint impact of such split with another individual bidding zone configuration, e.g. the merge of bidding zone B and bidding zone C into a single bidding zone.

A list of maximum 10 alternative configurations per bidding zone review region is envisaged. This list includes a limited number of:

- Individual alternative bidding zone configurations;
- Combination of two individual alternative bidding zone configurations;
- Combination of three (or more) individual alternative bidding zone configurations.

selected among all possible combinations of individual alternative bidding zone configurations that lead to the highest incremental improvements for the considered indicators.

The need to set a limit to the maximum number of alternative configurations to be studied is derived from the time window available to transmission system operators to perform the bidding zone review. This is laid down in Article 14(6) of the Electricity Regulation, according to which "*On the basis of the methodology and assumptions approved pursuant to paragraph 5, the transmission system operators participating in the bidding zone review shall submit a joint proposal to the relevant Member States or their designated competent authorities to amend or maintain the bidding zone configuration no later than 12 months after approval of the methodology and assumptions pursuant to paragraph 5*".

4.1. Please provide any comments on the approach to combine the incremental effects of individual alternative bidding zone configurations to study their joint impact.

4999 character(s) maximum

As a default, the approach proposed by ACER employs member states as base units for the assessment of either isolated effects ('individual alternative BZ configurations') or joint effects ('combination of individual alternative BZ configurations') while leaving open details on how to choose specific sets of alternative BZ configurations. The number of sets is yet to be specified, too.

This approach inherently introduces a large amount of arbitrariness to the definition of alternative BZ configurations that are to be assessed in the BZR. Applying it will render any claim implausible that the final set of configurations be the result of an 'scientific', at least objective, selection algorithm. It entails the risk that biased reconfigurations of single MS (most probably Germany) are submitted to the BZR while other MS's configurations remain unchanged. This would change the nature of the BZR from an impartial, European study to a study that moves the German BZ to the centerstage, i.e. pillorizing Germany's choice of market design.

In contrast, ACER should stay consistent in its claim of transparency and objectivity and submit only that European-wide alternative configuration to the BZR that results from the iterative clustering analyses in steps 1 to 3. If ACER was to submit more than one alternative configuration, it should be those that result from steps 1 to 3 when applying different scoring functions or levels of threshold for LMP differentials, disclosing transparently which set of parameters resulted in which configuration. ACER should abstain from submitting alternative configurations for isolated member states leaving the remainder of Europe unchanged.

4.2. In your view, how many alternative bidding zone configurations per bidding zone review region should be analysed during the bidding zone review to ensure an adequate level of representativeness, while still allowing transmission system operators to comply with the timeline set out in Article 14(6) of the Electricity Regulation?

at most 1 choice(s)

- [ ] Less than 5
- [x] Between 5 and 10
- [ ] More than 10

Topic 5: Other comments

5 Please provide any other comments on the high-level approach and add a sufficient explanation.

4999 character(s) maximum

Contact

ACER-ELE-2020-001@acer.europa.eu