- Consultation Response -

Europex response to ACER consultation on bidding zone review methodology

Brussels, 24 April 2020 | The bidding zone review and resulting decision on the configuration has fundamental consequences for the electricity market in all timeframes. Europex welcomes the opportunity to provide input into ACER's public consultation on the methodology and assumptions to be used in the bidding zone review process. It is important to ensure that there is robust and transparent analysis supporting both the development of the alternative configurations and their evaluation against the CACM criteria.

The assessment of the configuration impact on market efficiency, competition, liquidity and overall welfare must consider both short-term and forward markets, and use a range of appropriate measurement criteria, as well as recognise the interplay between these markets. Furthermore, a common pan-European approach to core aspects of the methodology is also essential, given the nature of the coupled European electricity market in the day-ahead (SDAC) and intraday (SIDC) timeframes, and the increasingly integrated balancing market.

We appreciate efforts from ACER to include stakeholders in this process and are ready to contribute further during the next steps of the bidding zone review.

1. Bidding Zone Review: Methodology

Topic 1: Pan-European consistency of the methodology

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.	○	○	○	○	●
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 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.

A common approach is essential for the coupled European electricity market in the day-ahead (SDAC) and intraday (SIDC) timeframes - and gradually in the future also for balancing. This is important to ensure that the market functions efficiently and can fully deliver its benefits in terms of optimisation (maximisation) of market efficiency, competition, liquidity and overall welfare. The bidding zone review, which fundamentally impacts the Internal Energy Market and seeks to address structural congestion that impacts multiple zones across Member State borders, must therefore take a pan-European approach.

To retain a pan-European approach, at least the following methodological aspects are vital:

- Common scenarios and assumptions, including grid, load and generation data;
- Common approach to the analysis (modelling chain), taking into account the different market-coupling approaches (flow-based or NTC);
- Common approach to cross-border capacity calculation, taking into account the 70% requirement as well as any derogations and national action plans in place.

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.

We have significant reservations about the regional approach taken during the development of the bidding zone configurations as well as the proposed regional approach to the analysis of these configurations.

We understand the need for regional flexibility when producing the configurations; however, the 'bottom-up' process by which TSOs delivered alternative configurations has produced insufficient results. Through this process, some bidding zone review regions (BZRRs) have only proposed the status quo or a limited set of alternative configurations. In this respect, a pan-European approach would help:

- to ensure that a balanced set of configurations are proposed within a region, taking into account multiple bidding zones, rather than an individual TSO approach;
- to ensure consistency and transparency of the analysis used to arrive at the configurations i.e. expert-based, model-based or a combination of the two;
- TSOs to agree on what severity of structural congestion should trigger a Member State to propose an alternative configuration (as opposed to each Member State making their own assessment);

- to evaluate pan-European benefits/drawbacks of both possible splits and mergers of current pre-existing bidding zones.

A more 'centralised' pan-European governance of the process would help Member States/TSOs agree on balanced, well-justified configurations. At the very least it would provide greater transparency and consistency in the analytical basis for the configurations.

Furthermore, we believe there is a need to mitigate the risks of a regional approach which could lead to a fragmented analysis of the impacts of the bidding zone configurations under review.

- **Consideration of neighbouring regions:** Section 4.7 of the explanatory document 'Consideration of neighbouring regions' outlines a trade-off between considering interactions between a BZRR and neighbouring regions and managing the complexity that a full pan-European simulation would entail. The table explains how neighbouring bidding zones will be taken into account. However, there is limited detail provided at this stage and we are concerned as to whether this approach will fully capture the interactions between regions. Further detail should be added to the proposed methodology document itself.

- **Geographical delimitation of the CACM evaluation criteria:** Article 13(3) paragraph 1 of the Proposal suggests three categories to which the CACM criteria must be assigned (geographical scope) but provides no further detail at this stage. It will be important to adequately justify why criteria should be computed and evaluated for a certain geographical scope or aggregated in a certain way as this is likely to have a significant impact on the outcome of the evaluation.

The Proposal outlines an evaluation approach for each CACM criterion; however, the level of detail provided is not sufficient. More precision is needed to ensure a consistent evaluation of the configurations (i.e. applied consistently by all regions and TSOs) as well as coherent implementation. The 'economic efficiency' and 'market liquidity' criteria in particular should take into account further quantitative indicators (see our response to questions 1.3.3 and 2.4).

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 the review should be published, subject to confidentiality issues and aggregation.	○	○	○	○	◉

2. There is a need for enhanced involvement of stakeholders during the bidding zone review process. This involvement should be described in the methodology.	

1.2.2. Please detail below which aspects of the Proposal adequately ensure transparency and stakeholders' engagement, and should therefore be retained in the final methodology.

Based on our reading of the Proposal there is very limited information about how TSOs in given BZRRs and/or ENTSO-E on a pan-European scale will ensure adequate transparency for market stakeholders, or how stakeholders would be involved in the process. While there is a mechanism to include stakeholders at a later stage in the evaluation of the configurations, this process should take place much earlier and in a systematic way (see our response to question 1.2.3).

1.2.3. Please detail below which aspects of the Proposal hamper transparency and stakeholders' engagement, and should therefore be amended in the final methodology.

We regret that there was very limited, if any, stakeholder involvement at a local, regional or pan-European level during the development of the Proposal. Transparency can be improved particularly with regards to the process, justifications and analysis that led to the proposed configurations.
In general, the level of stakeholder involvement described in the Proposal is poor. It is important to ensure stakeholders are involved as early as possible, so that they can support the analysis and evaluation. Stakeholder involvement could be improved in the following ways:

- **Systematic involvement of stakeholders during the evaluation stage.** Article 13(2) of the Proposal sets out a three-step approach to the evaluation of the criteria, but only proposes stakeholder involvement at step 3 (assessment of the final recommendation). Even then, stakeholders are only involved when TSOs are performing a 'severity assessment' of a potentially negatively impacted criterion. Stakeholders should be involved at all steps of the evaluation in an appropriate manner e.g. expert workshops, dedicated studies/surveys.

- **Setting up a dedicated Bidding Zone Stakeholder Advisory Group:** to provide support at key stages of the review. This has been implemented in a previous review – stakeholders can provide advice and expertise on key methodological aspects and decisions.

- **Consultation of the draft report:** as has been done for previous bidding zone reviews, the draft bidding zone review report should be shared with stakeholders before finalisation, allowing a suitable amount of time for stakeholders to comment and for their comments to be taken into account.

- **Cooperation with NEMOs in relation to SDAC and SIDC**: the outcome of a revision of the bidding zone review could significantly affect the design, functioning and operation of SDAC and SIDC. Consequently, we regret that there is no specific provision for cooperation with NEMOs, who are responsible for the market coupling operator (MCO) functions and who could support TSOs in providing a more complete assessment of the positive and negative impacts of alternative bidding zone configurations.

Topic 3: Need to ensure a conclusive bidding zone study

The steps and descriptions included in the methodology should be sufficiently clear and precise to ensure that the bidding zone study delivers an outcome that allows for an informed decision on whether to maintain or change the bidding zone configuration.

1.3.1 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. Quantifiable, possibly monetised criteria should be the focus of the bidding zone review.	○	○	○	◉	○
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.	○	○	○	○	◉
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.	○	○	◉	○	○
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.	○	○	○	○	◉
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.	○	○	◉	○	○
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 configuration may have relevant impacts on the patterns of day-ahead market prices, DSR (including day-ahead demand elasticity) should be more robustly considered.	○	○	○	○	◉
7. The current TSOs' proposal for the simulation of short-term welfare effects seems to highly depend on the difference between the costs of scheduling generation (and residually demand) units in day-ahead markets and the costs of (re)scheduling generation (and residually demand) units in the re-dispatching timeframe. Some assumptions included in the Proposal such as considering full cross- zonal coordination for re-dispatching or the insufficient consideration of the difference between the costs incurred in day- ahead and the re-dispatching timeframe may lead to conclude that all	○	○	◉	○	○

alternative bidding zone configurations deliver the same short- term welfare results as the status quo configuration. Such strong assumptions should be revised and aligned with the envisaged reality for the time horizon of the study as much as possible.					

1.3.3. Please detail below which aspects of the Proposal prevent the bidding zone review from being conclusive and should therefore be amended in the final methodology.

Comments to statement 1 in the table above: We support an approach whereby the review seeks to use quantifiable criteria whenever possible; however, the complexity of quantifying and monetising some criteria must be acknowledged. For example, when assessing liquidity impacts in the forward markets it is challenging to correctly quantify the potential impact on overall welfare. These impacts are nonetheless highly relevant and potentially significant, we therefore support the use of additional (non-monetised) indicators where relevant.

Comments to statement 3 in the table above: While we would agree in principle with this statement and acknowledge that some simplification is necessary, it very much depends on which parts of the methodology are being discussed. We would be concerned, for example, about over-simplification in simulating cross-zonal capacity calculation (see our comments to point 5).

Comments to statement 4 in the table above: The approach to assessing the criterion 'market liquidity' is currently inadequate. The Proposal explains that a quantitative assessment of the market liquidity impacts shall be done for the day-ahead market at minimum, but may incorporate additional timeframes, if technically possible.

A comprehensive analysis of the impacts of bidding zone delineation on market efficiency in all market timeframes is indeed highly relevant and necessary. It is particularly relevant for long-term markets which are essential for price risk management across many industrial value chains as well as the final (electricity) consumer.

We believe that liquidity in all market timeframes, including in forward/derivatives markets, is vital for well-functioning and efficient electricity wholesale markets as an integral core part of the energy system. Any loss of liquidity can result in a negative impact on socio-economic welfare and some direct negative consequences for final consumers. In addition, it is important that any assessment recognises the interplay between the forward and spot markets. Any significant negative liquidity and price formation impact on power forward markets can ultimately lead to a less efficient and less competitive physical spot power market and vice versa.

Liquidity depends on several factors, including inter alia bid-offer spreads, market depth, trading volume and churn rate. A range of indicators need to be used, in addition to the market depth analysis mentioned in the Proposal, to measure and quantify liquidity impacts. The Proposal should explicitly include an approach to assess liquidity impacts in all timeframes and include these descriptive indicators in its approach to assessing forward-market impacts.

Comments to point 5 in the table above: Capacity Calculation: We generally support the logic of taking into consideration the 70% requirement i.e. fulfilment of the requirements of Article 16(8) of

the IEM Regulation stating the minimum levels of available capacity for cross-zonal trade. However, the methodology should also take into account the derogations in place from this principle. This should include Action Plans, which will have an impact on cross-zonal capacities and levels of structural congestion in the timeframe of the review.

Comments to statement 6 in the table above: The proposed methodology as outlined in article 5.5 is very conservative on demand-side response. The Clean Energy Package requires that bidding zones are assessed on the basis of their ability to create a reliable market environment, including for flexible generation and load capacity; this is crucial in order to avoid grid bottlenecks, balancing electricity demand and supply and securing the long-term security of investments in network infrastructure. The integration of end consumers into the energy markets as well as other market-based flexibility options and new business models will change how load reacts to price signals. Emerging dedicated flexibility markets, which are also in line with the requirement for market-based redispatch in the Electricity Regulation (EU) 2019/943, address the load side in particular by providing the right incentives to increase or decrease load in affected regions, to adapt to volatile and weather-dependent generation patterns, and thus balance the grid locally. These developments are not duly taken into account in the TSO's methodology and should be explicitly addressed in more detail to ensure the methodology is robust and meaningful.

Furthermore, the modelling of renewables is fundamental for meaningful results, as their share will increase in the power system in the target year time frame and beyond. It is therefore important that the assumptions are clear and reflect the bidding behaviour of renewable assets.

Comments to statement 7 in the table above: The statement needs clarification; the Proposal should provide further details on how redispatch costs will be taken into account, in particular taking into consideration the risk that full cross-zonal redispatching might not be in place as per the European redispatch target model (Article 13 of the Electricity Regulation). To assess welfare, the full system costs must be taken into account. Redispatch costs alone are not an indicator for an inefficient system, they must be related to the dispatch costs and congestion income. A certain degree of redispatch is required, as grid extension for the last kilowatt-hour is not sufficient and would be very costly. This is why it is important to take into account both dispatch costs and redispatch costs when calculating social welfare.

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. Please specify

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.

It would be helpful for the development and analysis of bidding zone configurations to identify which network elements are more frequently congested. However, we are not convinced that a link can easily be made between the network elements and the costly remedial actions deployed.
We would support the identification of the geographical areas (bidding zones) which contribute the most to congestion on network elements.

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?

No

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

Yes

2.2.3 If so, how do you think a LMP simulation can be used to support the proposal of alternative bidding zone configurations?

It should be used to support the expert-based approach to delineate bidding zone configurations (i.e. the expert and model-based approach should complement each other).

It should be used as the main element to delineate bidding zone configurations together with techniques for clustering nodes into alternative bidding zones (i.e. a purely model-based approach should be used).

Other Please specify

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

LMP simulation can be a useful theoretical modelling tool to cluster nodes into bidding zone configurations to be assessed according to the methodology. LMP modelling should only be used to identify possible improvements to the established zonal market design. While we do not support mandatory LMP simulation, it should be used where relevant to support the expert-based approach. This will ensure that the bidding zone review delivers meaningful results that can be used as technical input for a discussion on bidding zone reconfiguration, taking into account political and regulatory constraints and further non-technical dimensions.

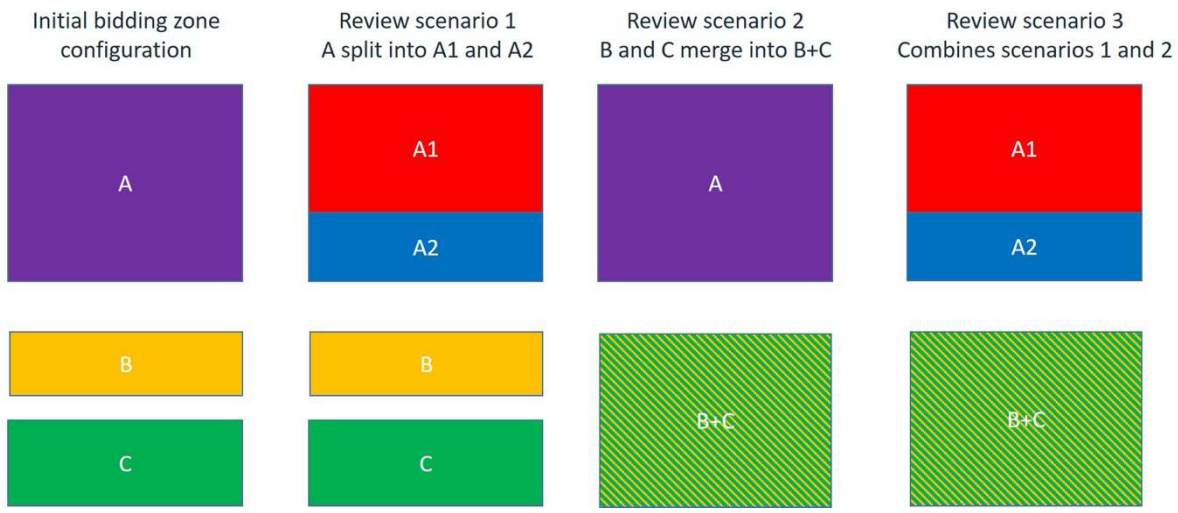
2.3 When proposing bidding zone configurations, do you see the need to ensure that the incremental effects of combined bidding zone configurations are identified (see the example below)? Please, provide your views on possible pros and cons of such an approach.

All shown combinations should be evaluated since it will be important to test splitting and merging of differently configured sets of geographical areas (cumulative effects of splits and mergers).

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?

Alternative bidding zone configuration should also consider the impact on SDAC and SIDC design and operations as well as ensure appropriate involvement of NEMOs. For example, a significant increase of the number of bidding zones, especially in the context of a flow based approach, could disproportionately increase the complexity of SDAC and SIDC, disregarding possible algorithmic alternatives. Such was the case in the German-Austrian border split in October 2018. This could raise challenges in integrating any significant increase in the number of bidding zones with new products/requirements envisaged for implementation in SDAC and SIDC, both from a procedural and from an algorithmic point of view. Consequently, involvement of NEMOs would ensure a more comprehensive assessment of alternative configurations of bidding zones, with a wider view on possible positive and negative impacts.

The criteria outlined in the CACM regulation form a consistent basis for a bidding zone review if sufficiently 'operationalised' i.e. measured with the right metrics. The approach to evaluating some existing criteria i.e. market efficiency and liquidity, could be improved.

We advise against using the same metrics to measure liquidity in continuous markets and markets based on auctions. If the same concepts are applied to fundamentally different market logics, the outcome might not reflect the impact of a bidding zone reconfiguration. This is why we suggest some additional metrics to measure liquidity especially in auction-based markets.

Further liquidity metrics include:

- For auctions:

    - Volumes of orders submitted per bidding zone
    - Volumes of orders participating to the price formation per bidding zone (taking into account cross-border capacity)
    - Market Resilience
- For continuous markets:
    - Bid-ask spread.

Conclusion

3. Please provide any further comment

Markets in all timeframes, but particularly long-term markets, need time to adapt to any bidding zone reconfiguration. Article 14(10) of the reviewed Electricity Regulation leaves the implementation date and any transitional arrangements to be defined. A sufficient lead time of at least 24 months is needed to allow for technical implementation and the necessary market adaptation, ensuring a smooth and predictable transition for all market participants and related stakeholders.

About

Europex is a not-for-profit association of European energy exchanges with 29 members. It represents the interests of exchange-based wholesale electricity, gas and environmental markets, focuses on developments of the European regulatory framework for wholesale energy trading and provides a discussion platform at European level.

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