GERMAN TSOS FEEDBACK TO ACER'S PRELIMINARY POSITION IN PROCEDURE REF. ACER-ELE-2022-009 CONCERNING THE ALTERNATIVE BIDDING ZONE CONFIGURATIONS TO BE CONSIDERED IN THE BIDDING ZONE REVIEW PROCESS

The German TSOs – 50Hertz Transmission GmbH, Amprion GmbH, TenneT TSO GmbH and Transnet BW GmbH – welcome the cooperation with ACER in the process of defining alternative bidding zone configurations and the opportunity to give feedback to ACER's preliminary position on alternative bidding zone configuration published on 24.05.2022. The response of ENTSO-E to ACER is fully supported by the German TSOs. In addition to this, the German TSOs highlight the following points:

General remark
The period of time for making comments and giving feedback to ACER was very limited, including also bank holidays. German TSOs understand the restrictions on ACER´s side. However, in order to provide adequate feedback, an accurate review of the results is needed, for which more than the originally foreseen time is required. In particular, a correct identification of multiple counting CNEs was not possible within the deadlines set by ACER (considering in particular the detailed representation of the German grid in TYNDP models). Moreover due to these short deadlines, the German TSOs cannot provide a comprehensive feedback on whether a "unique and unambiguous assignment of generation and load units to a bidding zone" is possible for the proposed German split scenarios. In this regard, the German TSOs would like to mention that the practical implementation of splits, e.g. with regards to the allocation of nodes in lower voltage levels to control areas, would come along with less issues in case splits would follow control area borders.

Remarks to the ACER methodology
The German TSOs would like to mention that ACERs analysis for defining alternative configurations is solely based on two out of the full set of indicators (Loop and Internal Flow (LIF) and weighted Price Dispersion (PD) indicator) that are to be assessed in the bidding zone review. In contrast, according to the regulation, structural congestions shall be the basis for the definition of bidding zone borders. For this reason, it is not fully clear why ACER:

1. chooses these two indicators to be more relevant than others, and
2. considers a weighting when calculating the PD indicator instead of solely relying on the results of the LMP simulations (see also below)

Furthermore, the German TSOs raise concerns with respect to the methodology applied by ACER for both calculating the 1) LIF indicator and the 2) Price Dispersion Indicator.

<u>Loop Flow and Internal Flow Indicator</u>
In its first draft of the preliminary position, ACER calculated the LIF Indicator by summing up the absolute values of the considered Critical Network Elements (CNEs). The CNE list contained both cross-border as well as internal network elements. All TSOs, including German TSOs, concluded that this led to an issue of "multiple counting" of certain CNEs that are included only once in CWE / Core FB Day-Ahead Capacity Calculation but modelled as multiple network elements in the data set and therefore considered multiple times as CNEs in the ACER methodology. This approach artificially increases the LIF indicator for some countries. For example, in Germany, lines that cross control area borders or contain both cable and overhead parts are modelled in several network elements and were therefore considered multiple times in the CNE list (e.g. line 32775_MECK_400_33172_HETH_400_1_CKT, which is divided into 11 partial lines, four of them are CNEs). Simply summing up the absolute values of these flows results in a significant overestimation of LIFs.

German TSOs acknowledge that ACER took the concerns of all TSOs regarding the "multiple counting" into account. However, ACER's adjusted approach to calculate the LIF indicator only with interconnectors is still not suitable for the following reasons:

1. By reducing the set of the considered CNEs for the LIF indicator to only interconnectors, the indicator is no longer an indicator of internal flows + loop flows, but becomes only an indicator of loop flows. This is because by definition, an interconnector cannot carry internal flows. As a result of this choice, this indicator thus now only serves to find configurations which reduce loop flows to the maximum extent but does not enable the identification of the configurations which would comply with the 70% targets .

2. In combination with taking the sum of absolute levels of loop flows, the usage of only interconnectors as CNEs entails that bidding zones with a high interconnector capacity / that put significant efforts in increasing cross-zonal capacities are selected preferentially compared to bidding zones with less interconnector capacity. Even if the level of loop flow is relatively low compared to the installed line capacity, they could be selected for a bidding zone split. German TSOs consider this as going against the spirit and intention of fulfilling the internal energy market / making available a relative value of 70% of capacity for cross-zonal trade.

   Suppose there are two bidding zones with comparable load/generation, A and B. Bidding zone A contains 20 interconnectors, each carrying a loop flow of 100 MW and an installed capacity of 1000 MW. LF indicator = 20*100 = 2000 MW. Bidding Zone B contains 8 interconnectors, each carrying a loop flow of 200 MW, also with a capacity of 1000 MW. LF indicator = 8*200 = 1600 MW. In this situation, bidding zone A would rank higher on the LIF indicator than bidding zone B, despite that the loop flows on the interconnectors of bidding zone B are higher (in relation to the installed line capacity) than those for bidding zone A.

Given these methodological shortcomings, German TSOs strongly recommend to consider relative values instead of absolute values for the LIF indicator

Unspecified Loop Flow methodology

ACER's proposal does not specify the loop-flow calculation methodology and in particular what Generation Shift Key has been used for the Loop Flow computations. In particular, using a Generation Shift Key based on some specific technologies would bias the loop flow computations. Shifting e.g. Generation from only thermal power stations down would leave the other renewable generators as a predominant source of loop flows. This is an incorrect representation of physical realities and penalizes Renewable Energy production which contradicts the major European target of CO2 neutrality. German TSOs ask ACER to provide all the details of the approach used by ACER for the loop-flow calculation for the sake of transparency of this important decision step.

Price Dispersion Indicator

German TSOs consider it as not appropriate that ACER applies two weighting factors to calculate the standard deviation of LMPs per bidding zone. While the first weighting which calculates the standard deviation per bidding zone while respecting the cleared load per node might be understandable, the second weighting (weighting the value of the standard deviation of each BZ by the cleared volume of generation and demand of the considered BZ over the total cleared volume of generation and demand of all BZs) disproportionally disadvantages large bidding zones. This results in a tendency that the algorithm targets first at large bidding zones with the aim of creating new clusters with similar sizes. According to the regulation, structural congestions shall be the basis for the definition of Bidding Zone borders. As congested elements can be directly identified from the LMP analysis, it is also not fully clear why such a weighting / why the assessment of an economic efficiency indicator is necessary in general.

In order to allow for a neutral assessment of all existing bidding zones, German TSOs strongly recommend to discard the (second) weighting applied to the calculation of the standard deviation.

Focus of the proposed bidding zone configurations

The bidding zone review is a European study whereas the list of alternative BZ configurations proposed by ACER has a strong focus on splits of individual bidding zones taken separately and do not sufficiently consider combinations of individual splits. For Germany in particular, the indicators for economic efficiency as well as for loop and internal flows differ only marginally when increasing the number of splits (> 2) compared to the status quo scenario (see slide 9, Annex 1). Having 5 configurations out of 8 where Germany is split alone therefore does not seem justified and proportionate.

Furthermore, it is not clear, why ACER focuses on investigating individual bidding zones while combinations, in general, capture more welfare benefits than individual splits (also considering ACER´s assessment). Studying several alternatives for just a single bidding zone whilst knowing that – if at all – only one configuration of these can eventually be implemented, neglects the potential increase in economic welfare that would be achieved through the split of other bidding zones. Studying combinations (in addition to individual splits) of BZ configuration changes allows for comparing

and assessing incremental benefits of combining reconfigurations with each other. Such comparisons contribute to the robustness of the outcome and recommendations made. ACER should therefore limit the number of individual splits to a few per existing bidding zone and instead focus on combinations of the individual split scenarios across different countries when making its decision. This would give the study a European instead of a national character.

Proposals for individual German Bidding Zone split scenarios for the Bidding Zone Review
For defining the exact delineation of the various configurations with splits of the German-Luxembourg bidding zone in multiple zones, the German TSOs recommend to also consider the current borders of the existing Control Areas in Germany when proposing alternative configurations. This could ease the study and the implementation. This is, among others, because the Control Areas generally tend not to split DSO grids and the unique assignment of nodes to bidding zones should therefore be generally easier.

In this regard, the German TSOs see a benefit in studying an additional split of Germany into two bidding zones, replacing the currently proposed split into 4 or 5 zones, based on the configuration as shown on slide 20 from ACER's presentation given on 11 May. However, this configuration would need to be slightly adjusted to consider control area borders as far as possible, in particular the control area border between Amprion and TenneT Germany in the Northwest of Germany. A respective node to zone assignment was shared with ACER on 2 June. German TSOs welcome ACER´s willingness to consider this request and will work closely with ACER in this process.

In addition to this, the German TSOs propose to consider the borders of control areas in ACER's current individual German split into four zones more accurately in case this split is proposed. The corresponding classification of nodes has been submitted to ACER.

Provision of additional data
In order to understand the calculation of loop- and internal flows, the German TSOs kindly ask ACER to provide additional data. Specifically, the overall flow, as well as the loop flows on every considered CNE would help to better understand the results.